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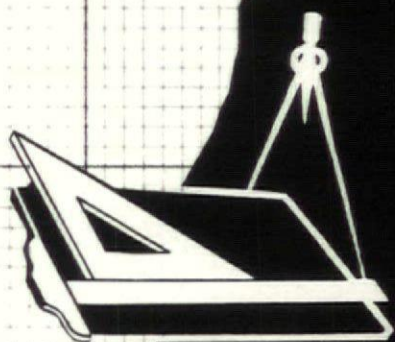
# new hampshire architect

PUBLICATION NEW HAMPSHIRE CHAPTER AMERICAN INSTITUTE OF ARCHITECTS

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*Annual School Issue*



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# NEW HAMPSHIRE ARCHITECT

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## SCHOOL ISSUE

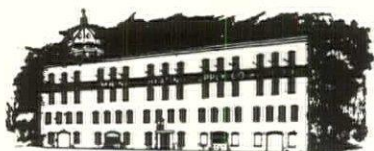


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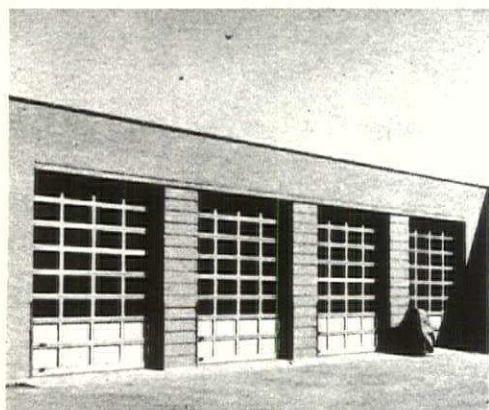
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## SPRAGUE NAMES NEW VICE PRESIDENT

Mr. P. Shaw Sprague, chairman of the board of C. H. Sprague & Son Company, coal and fuel oil distributors, announces the election of J. William Pettipas as a director of the company and as Vice President-Operations, a new position.

Mr. Pettipas joined Sprague's operating department in 1923 and progressed through the many phases of operations on Sprague's tidewater docks to become, in 1943, General Dock Superintendent of all Sprague's tidewater coal terminals in New England and New York. In this position he has been responsible for the development of a new coal terminal at Portsmouth, New Hampshire in 1948, and beginning in 1949, the development and operation of fuel oil facilities at eight tidewater locations in New England, having a combined storage capacity of over 80,000,000 gallons. In 1960 he became vice president and a director of Atlantic Terminal Sales Corp., a Sprague affiliate

in Newington, N. H., which terminals and distributes light oils and gasoline.

The Sprague company, with its home office in Boston, Mass., distributes Bituminous coal from its own mines to consumers in 41 different states and countries, and also distributes industrial fuel oil in all the New England states from these eight ocean terminals along the coast from Brewer, Maine to Providence, R. I.

Mr. Pettipas' new position results from the growing size and importance of Sprague's operating facilities in the distribution of fuel to New England, which he was instrumental in developing and now is responsible for operating.

Mr. Pettipas and his wife live in Westwood, Mass. He is a member of the Engineers Club of Boston. He is a licensed professional mechanical engineer, and has held for many years, a license as a hoisting engineer for steam, electric and internal combustion, as well as a pilot's license for private aircraft.

## NEW GUIDE FOR PLANNING SCHOOL BUILDINGS NOW IN PREPARATION

In 1952 the State Department of Education working with a group of New Hampshire architects and school administrators published its first guide to assist local school boards, citizens' committees, principals, superintendents and architects in the planning and construction of new school buildings. This publication is now out of print and needs to be revised.

Through the efforts of the State Department of Education, a new committee consisting of members appointed by the New Hampshire Chapter of the American Institute of Architects and the New Hampshire Superintendents' Association has been appointed to jointly prepare with the State Department of Education a revision of this old guide. The committee is made up as follows:

### Architects

W. Brooke Fleck, Hanover  
Andrew C. Isaak, Manchester  
Richard Koehler, Manchester  
Joseph F. Lampron, Manchester  
John R. Holbrook, Keene  
Stephen P. Tracy, Nashua

### Superintendents of Schools

Andrew A. Dominick, Manchester  
Herbert R. Hagstrom, Portsmouth  
Norman R. Hartfiel, Hillsboro

### State Department of Education

Damon A. Russell, Director, Administrative Services  
Paul E. Farnum, Deputy Commissioner of Education

This committee has already met twice during the past few months and have basically agreed that the new guide should be designed specifically to help local school planning committees and school administrators with the general problems of procedure and organiza-

tion of a school building program. Once the guide has been completed it is the hope that this same committee working closely with the Department of Education will prepare separate sections dealing with the specialized areas of the school plant such as the science suite, art department, homemaking room and the administrative unit. It is the hope of this Committee that these special areas will be treated in such a way that the material will be available in separate brochures for local use.

The tentative outline or table of contents for the new building guide is as follows:

1. Continuing Awareness of School Building Problem
2. Recognition of Specific Building Problem
3. Starting action
  - A. Gathering and Presentation of Evidence and Facts
  - B. Creation of Study Groups and use of an Educational Consultant
  - C. Funds for Preliminary Surveys and Study
  - D. Responsibilities of State Agencies (Education, Health and Fire Control)
4. Presentation of Problems to Voters for Action
  - A. Public Meetings
  - B. Warrant
  - C. Planning Appropriations
  - D. Appointing Committee
5. Educational Specifications
  - A. By Local Groups
  - B. By Educational Consultants
  - C. By Staff
  - D. By State
6. Engaging Architect
7. Appropriations for Buildings
  - A. State Aid
  - B. Bond Issue

(Continued on Page 8)





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(Continued from Page 6)

- C. Capital Reserves
8. Selecting the Site
9. Preparation of Plan and Awarding Contract
10. Construction and Equipping of Building
11. Acceptance of Building
12. Dedication of Building
13. Legal References
14. Bibliography

The present plan of this committee is to have the revised "Guide for Planning the Construction of School Buildings" available for distribution within the next year.

## PLANNING HIGH SCHOOL LIBRARIES

The interest in school libraries for New Hampshire schools has not been stirred up simply by the Department of Education. True, provisions for an adequate library must be part of any plans for which a district is to receive state building aid and, by 1963, one of the conditions for approval as a high school will be that an adequate school library is available. The interest, however, has arisen from the changing nature of instruction itself which has made the library the instructional heart of the good school. Even the name of the facility — Instructional Materials Center — suggests that we no longer think of the library as a one-room facility housing a large collection of fiction books usually donated by well-meaning citizens and service organizations.

Actually the whole range of instructional and developmental materials will be represented in its service: books, magazines, pamphlets, audio-visual materials, audio-visual equipment, and actual objects such as models and miniatures and specimen collections. The facility will have many areas, each of which might be separate rooms: reading room, stack area, storage for periodicals, workroom, librarian's office, conference rooms, audio-visual storage and previewing, professional library, and independent study areas.

In planning an adequate library, building committees and architects should make sure that they are constructing a facility that will meet instructional needs in the future and that they are not thinking in terms of the kinds of libraries that were considered adequate 25 years ago. They might turn to the following publications for help:

**Planning Schools for New Media**, a Guide for Boards of Education, School Administrators, and Architects developed as a Title VII Project from the U. S. Office of Education. Available for \$1.00 per copy from Division of Education, Portland State College, Portland, Oregon. 1961. 72 p.

**Ideas for Planning Your School Library**, a twelve-page brochure of the Massachusetts School Building Assistance Commission printed in September, 1961, and available from

William Black, Chief School Plant Specialist, 88 Broad Street, Boston 10, Massachusetts.

**Standards for School Library Programs.** A 1960 publication of the American Library Association (50 East Huron Street, Chicago 11, Ill.). \$2.50.

**Planning Materials Centers, Bulletin 22E.** A 1958 state guide for Florida schools available from the State Department of Education, Tallahassee, Florida. 50 p.

**Dear Mr. Architect.** A 1952 revised publication of the American Association of School Librarians. Available from the American Library Association, 50 East Huron Street, Chicago 11, Illinois. 16 p. 506.

**Planning a School Library.** A 20 minute color, sound film explaining basic principles of good library layout and equipment planning. Available from the Audio-Visual Center, University of New Hampshire, Durham, for a rental fee of \$4.50.

**READING ROOM.** This centrally located area should seat 10% of the student body in schools over 550; 45-55 students in schools under 550, and should provide thirty square feet per student. Adequate daylighting will insure a colorful and light interior. East and west windows create control problems; light should be admitted by south and north windows or by directed reflection of sunlight to overhead diffusing surfaces. Artificial light should be flush with ceiling and of low surface brightness.

Clocks should be non-ticking; Class period signals of two-toned chimes, not bells. Double-facing bookshelves about four feet in height are desirable when located in center of room with reading areas in alcoves around outer edge of rooms. Beware of too much cross movement on the part of library users.

Soundproofing can combine acoustical treatment with thermal insulation. Rock wool or glass wool effectively insulates against outdoor as well as indoor noise. Floors should be of resilient material, light-colored and easy to maintain; carpeting should be given every consideration because of the economy of its use and maintenance.

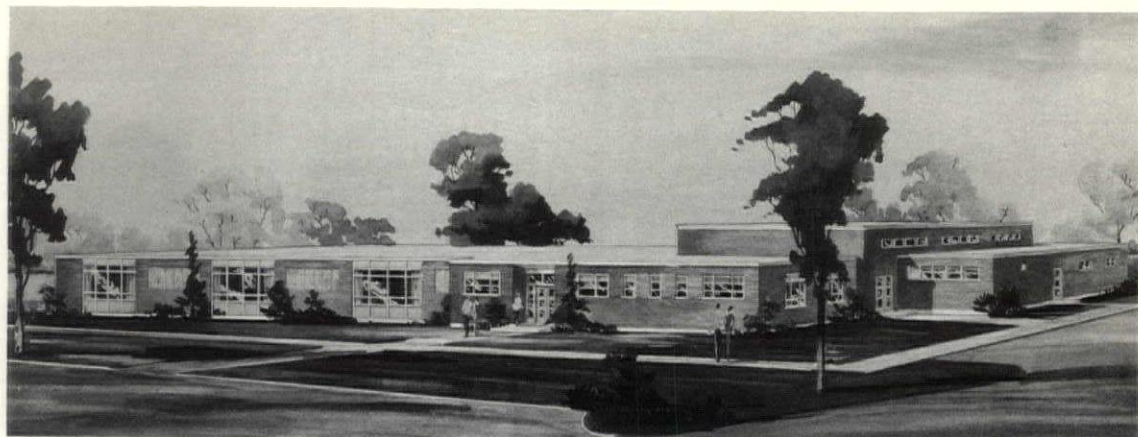
Equipment should include a charging desk; files; spaces for records, slides, and films; map files; card index; magazine and newspaper racks; bulletin boards; tables and chairs; adjustable bookshelves.

Details for planning shelving can be found in the AIA publication *Standards for School Library Programs*, pp. 124-126.

No plans should be completed until "I.Q." spaces have been considered, probably as a part of the reading room. A good description of these areas can be found in *PLANNING SCHOOLS FOR NEW MEDIA*, p. 14. These "individual quest" spaces are cubicles or carrels containing a desk, storage space, outlets

(Continued on Page 22)





*Somersworth Junior High School, Somersworth, New Hampshire*

## **New Hampshire's First Electrically Heated School . . .**

Now under construction, the Somersworth Junior High School is an example of the most modern type of school construction. The outstanding feature of this building is flameless electric heat.

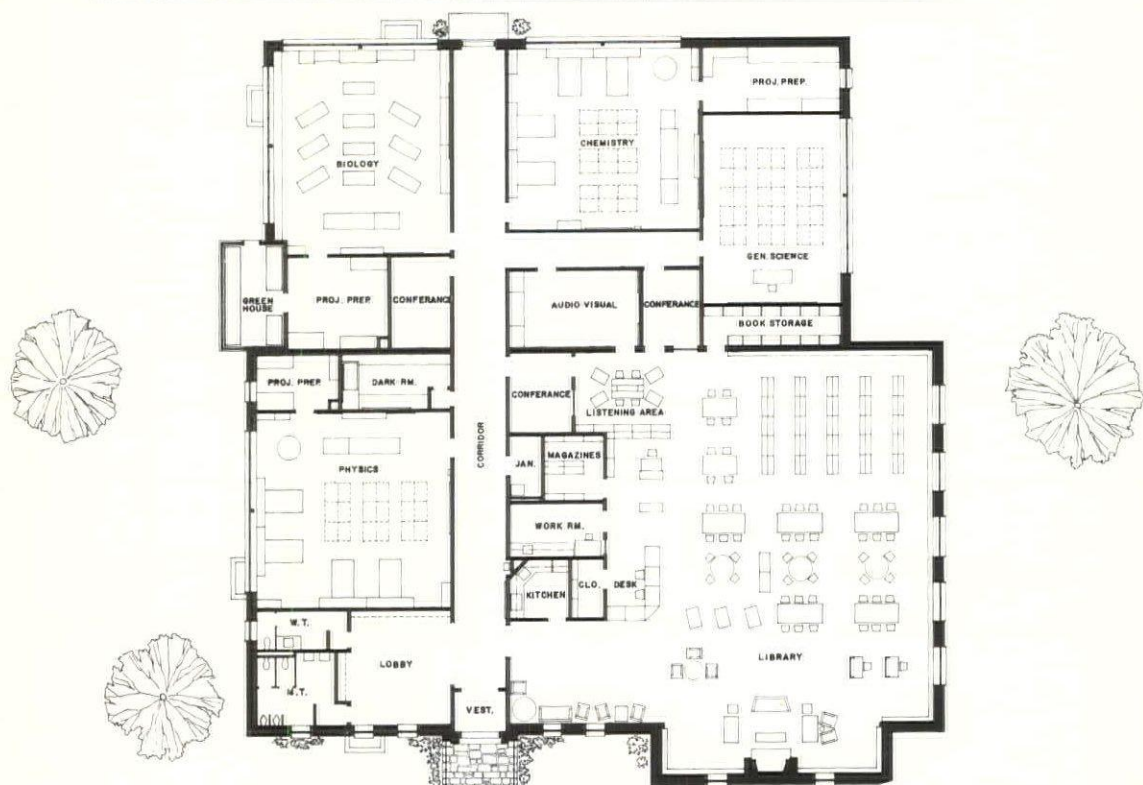
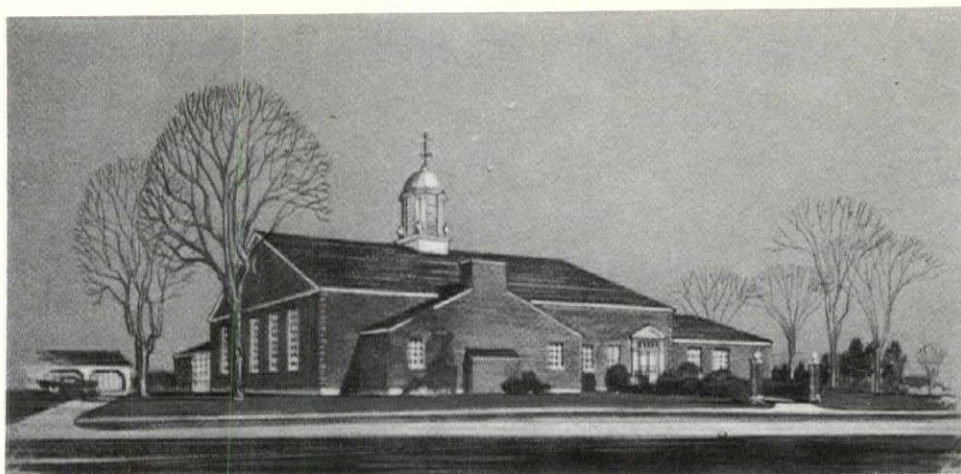
Missing from this building is the boiler room, stack and associated piping needed to distribute heat because with electric heat, none of these are needed. Instead each classroom contains its own heating system with attractive, efficient electric heating units. Thermostats in each classroom assure the desired temperature in each room with complete independence of all other rooms. Time clocks and electric controls will allow advance programming of desired temperatures in desired areas.

Maintenance expense will be at a minimum because with this heating system there is no annual cleaning and as there are no moving parts, there is nothing to wear out or be replaced. Cleaning and redecorating cost will be at a minimum.

Throughout New Hampshire there's a big swing to flameless electric heating in commercial buildings as well as homes. For the architect, builder or developer, additional information and assistance concerning flameless electric heating is available from Public Service Company of New Hampshire.

Architect:	Irving W. Hersey Associates, A.I.A.
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## LIBRARY & SCIENCE BUILDING

Proctor Academy, Andover, N. H.

### CONSTRUCTION DATA:

Exterior walls: Brick veneer cavity wall over 12" concrete block. Roof: Wood trusses; 2" plank covered with Class "A" asphalt shingles. Floors: Concrete. Finish floors: Vinyl; vinyl asbestos in corridors. Interior walls: Exposed block. Ceilings: Metal acoustical tile with insulation above. Heat: First floor, forced hot water, radiant ceilings with individual thermostats. Basement: Unit heaters. Exterior platforms: Electric. Lighting: First floor, fluorescent; Basement, incandescent. Plumbing: Toilets; Water, waste and gas or lab equipment.

Sash: Aluminum. Doors: Wood. Sprinklers: Wet pipe in basement, dry pipe under roof, first floor.

### SPECIAL EQUIPMENT INCLUDED:

Tack and chalk boards, kitchen equipment and drinking fountains, wood shelving and casework. NOT INCLUDED: Equipment and furnishings.

AREA: First Floor: 11364 sq. ft.  
Unfinished Basement 6661 sq. ft.

18,025 sq. ft.

TOTAL COST: \$226,725.00

**Horace G. Bradt & Associates, A. I. A., Architects & Engineers, Exeter, N. H.**

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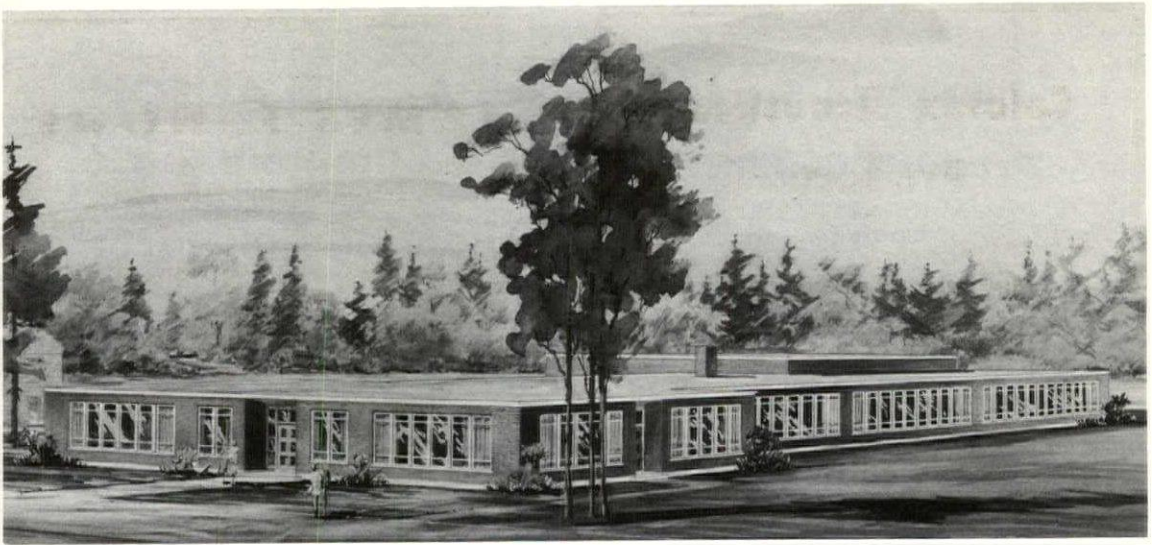
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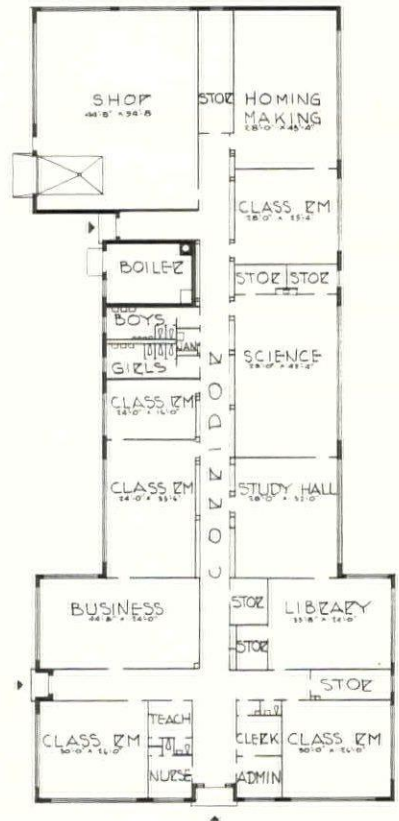
**46 Bridge Street, Nashua, New Hampshire**



## NEW HIGH SCHOOL BUILDING Antrim, New Hampshire

### DESCRIPTION:

Reinforced Concrete Foundations; Reinforced, Dampproofed Concrete Floor Slabs; Structural Steel Frame; Precast Concrete; Insulating, Roof Decking and Twenty Year Bonded Roofing; Lead coated Copper Flashing; Aluminum Sash; Brick Facing with Cinder Tile Backing; Cinder Tile Interior Partitions; Asphalt Tile Floors; Ceramic Tile Floors in Toilets; Acoustical Tile Ceilings; Steel Interior Doors and Frames; Fluorescent Lighting; Forty (40) Plumbing Fixtures; Zoned, Forced Hot Water Heating System; Program and Fire Alarm Systems.



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Total Cost of Building .....	\$182,320.00	100.0	\$10.47	0.734
Total Volume: 247, 878 cu. ft.				
Total Floor Area: 17,395 sq. ft.				
Ceiling Heights: Classrooms — 10'-4" — Shop 10'-6"				

Irving W. Hersey Associates, A. I. A., Architects, Durham, N. H.  
Wintson P. Titus, General Contractor, Laconia, N. H.



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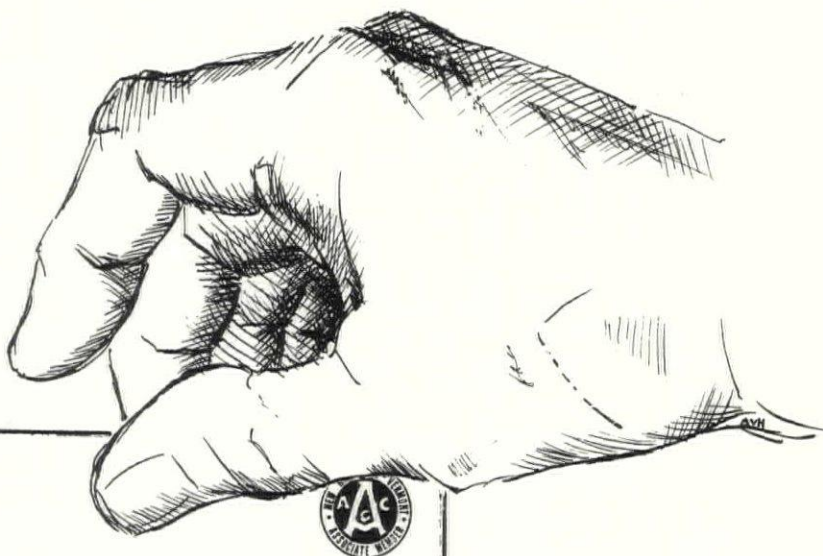
Windham Elementary School

Antrim High School

Tilton-Northfield Addition

Somersworth Grade School

Danville Elementary



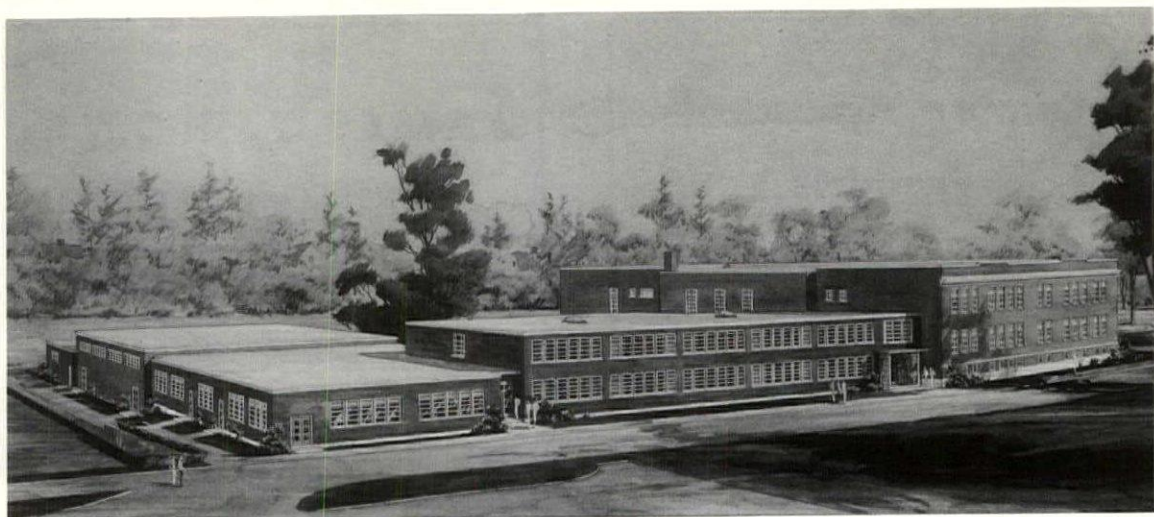
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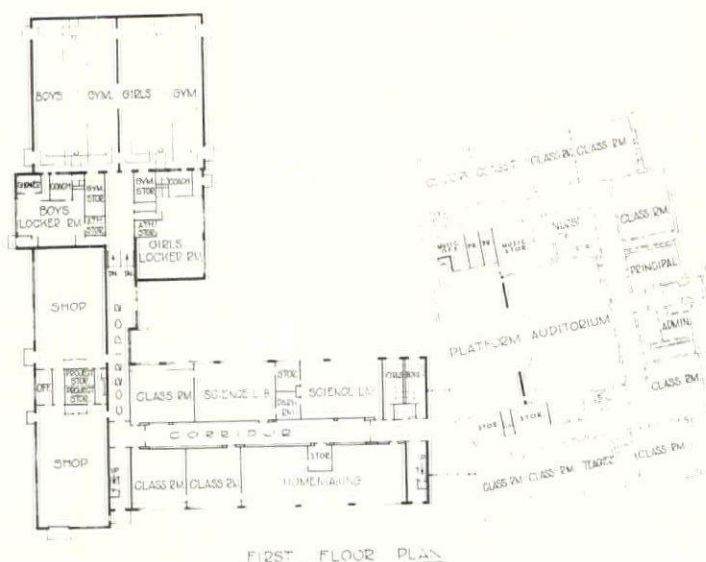
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**Addition to  
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Billerica, Massachusetts**



**DESCRIPTION:**

Reinforced Concrete Foundations; Reinforced, Dampproofed Concrete Floor Slabs on Grade; Structural Steel Frame; Concrete Slab over Steel-tex on Second floor; Precast Concrete, Insulating, Roof Decking and Twenty Year Bonded Roofing; Lead coated Copper Flashing; Aluminum Sash; Brick Facing with Cinder Tile Backing; Cinder Tile Interior Partitions; Asphalt Tile Floors in Classrooms and Corridors; Vinyl Asbestos Tile in Gyms; Terrazzo Floors at Main Entrances; Ceramic Tile Floors and Dados in Toilets and Shower Rooms; Acoustical Tile Ceilings in Classrooms and Corridors; Plaster Ceilings in Shower and Locker

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Total Floor Area in New Addition: 40,339 sq. ft.

Total Volume of New Addition: 614,862 cu. ft.

Ceiling Heights: Classrooms — 10'-0"

Shops — 11'-0"

Gyms — 18'-0"

**Irving W. Hersey Associates, A. I. A., Architects, Durham, N. H.**





Interior and exterior of St. Catherine's School, Manchester. Architect: John P. Heffernan, Boston. Contractor: Blanchard Stebbins, Manchester.



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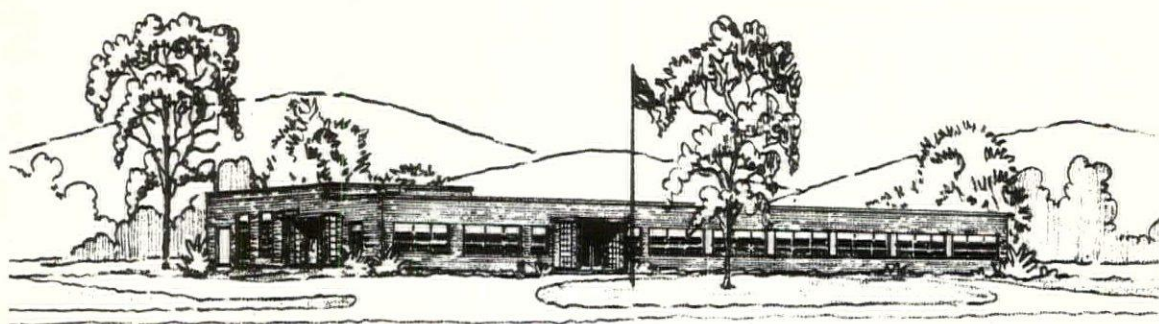
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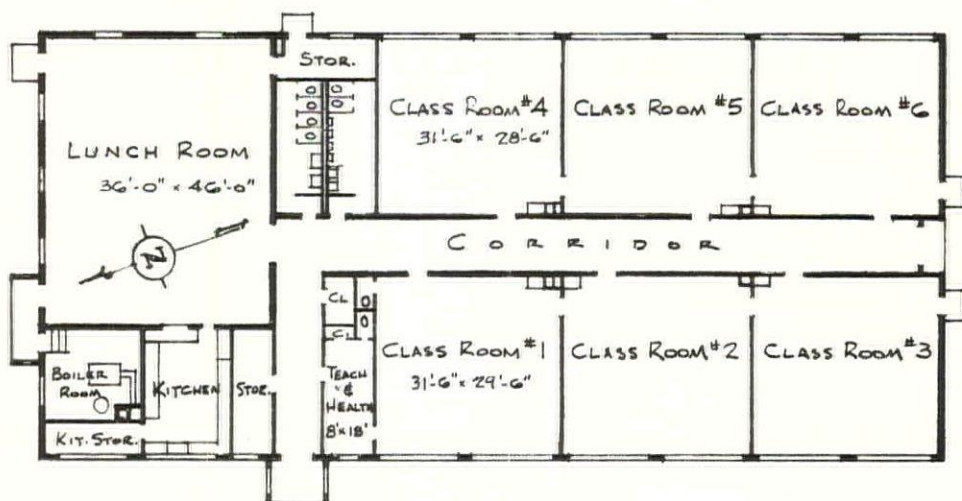
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## ELEMENTARY SCHOOL

### Campton, N. H.



This building under construction on route 175, replaces six small wooden structures.

#### Description

Site preparation includes drives, parking area, walks and loaming; reinforced concrete foundation walls; damp proofed reinforced concrete floor slab on gravel fill. Exterior walls Norlite blocks faced with brick. Interior partitions Norlite blocks with Glazon dadoes in corridors and boys' and girls' toilets. Roof framing steel joists and Insulrock roof slabs. 20 year tar and gravel roof. Aluminum sash. Steel doors and frames. Corridor ceiling is

suspended incombustible acoustical tile. Asphalt tile flooring except ceramic tile in all toilets. Light proof window shades. Metal toilet partitions. Metal flag pole. 2 movable wardrobe units and one steel storage cabinet in each classroom. Incinerator. Forced hot water heating system with electric individual room controls. Mechanical ventilation. Hot and cold water to each lavatory including classrooms; drinking fountain in each classroom; septic tank and filter bed. Lighting fixtures in general are fluorescent; underground electric entrance.

Item	Cost	% of Total Cost	Cost Per Square Foot
Structure .....	\$ 80,217	76.6	\$7.63
Heating & Ventilating .....	12,890	12.3	1.22
Plumbing .....	6,831	6.52	.65
Electric .....	4,796	4.58	.46
	<hr/> \$104,734	<hr/> 100.00	<hr/> \$9.96

Time of bids: October 17, 1961

Area of building: 10,511 sq. ft.

**Norman P. Randlett, A. I. A., Architect, Laconia, New Hampshire**  
**Clinton M. Clough, General Contractor, Littleton, N. H.**



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**LITTLETON, NEW HAMPSHIRE**

**TEL. 4-2025**

---

**GENERAL CONTRACTOR**

**for**

**Campton Elementary School**

**Campton, N. H.**



## DANBURY ELEMENTARY SCHOOL

### Danbury, New Hampshire

#### DESCRIPTION:

Foundation — concrete; Exterior walls — brick facing with concrete block back up; Gable Ends — redwood siding, painted; Interior Partitions — concrete block, painted; Roof Framing — wood trusses with split rings and plywood sheathing; Roof — asphalt shingles; Floors — dampproofed concrete slab on earth with asphalt tile over; Windows — Pella wood windows; Ceiling — Fire Guard acoustical tile; Wardrobes, Counters, Project Sinks, and Drinking Fountains — Grade — Aid steel cabinets; Heating — forced hot water with base board heat and exhaust system; Electrical — fluorescent strips, new septic system.

	Cost	% of Total Cost	Cost Per sq. Foot	Cost Per cu. Foot
Structure .....	\$37,322.24	73.6	9.75	.586
Plumbing, Heating & Ventilating .....	\$10,378.00	20.4	2.71	.163
Electrical .....	\$ 3,725.00	6.0	.79	.047
<b>Total Contract Price .....</b>	<b>\$50,725.24</b>	<b>100%</b>	<b>13.25</b>	<b>.796</b>

Total Volume: 63,717.94 cu. ft. — Floor Area: 3,823 sq. ft. — Date of Bid: August 10, 1961.

**W. Brooke Fleck, A. I. A. Architect, Hanover, New Hampshire**  
**General Contractor: Lull & Prescott, Inc., Elkins, New Hampshire**



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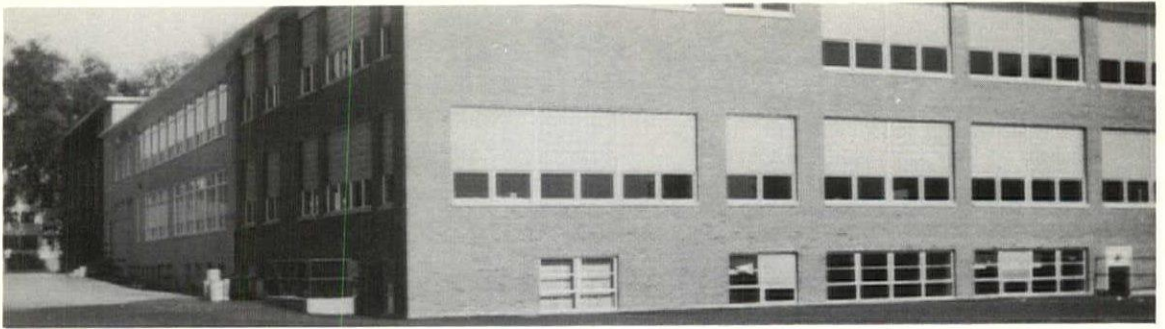
**NEW LONDON, N. H.**

Tel. LA 6-2961

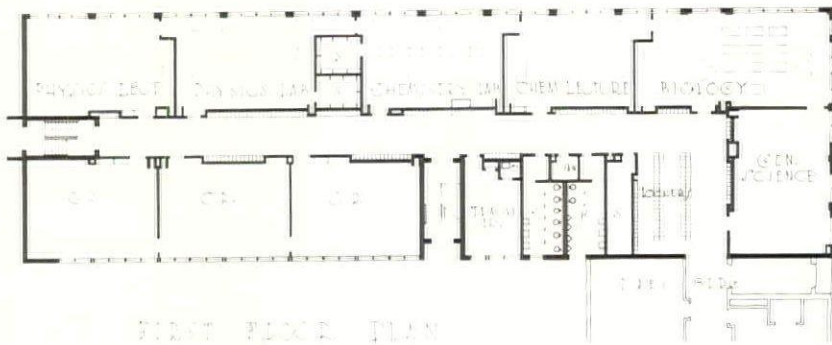
**GENERAL CONTRACTOR**

**for**

**Danbury Elementary School  
Danbury, N. H.**



## Addition to SENIOR HIGH SCHOOL Exeter, New Hampshire



### CONTENTS:

#### Basement:

Mechanical Drawing Room — 24 ft.-3 in. x 33 ft.-4 in.; Machine Shop — 61 ft.-6 in. x 65 ft.-10 in.; Electric Shop — 33 ft. x 61 ft.-6 in.; Cafeteria — 61 ft.-6 in. x 64 ft.-6 in.; Kitchen — 25 ft.-8 in. x 43 ft.-6 in.; Kitchen Storage — 15 ft.-6 in. x 16 ft.-8 in.; Dietician's Office — 8 ft.-6 in. x 11 ft.; Boys' Toilet — 9 ft.-4 in. x 12 ft.-6 in.; Girls' Toilet — 9 ft.-4 in. x 13 ft.-6 in.; Janitor's Closet — 4 ft. x 4 ft.-10 in.

#### First Floor:

3 Classrooms — 24 ft.-3 in. x 32 ft.-6 in.; Physics Lecture — 24 ft.-3 in. x 36 ft.-6 in.; Physics Lab — 23 ft. x 35 ft.; Chemistry Lab — 23 ft. x

35 ft.; Chemistry Lecture — 23 ft. x 32 ft.-6 in.; 2 Supply Rooms for Labs — 8 ft.-6 in. x 11 ft. each; Biology — 23 ft.-6 in. x 48 ft.-6 in.; General Science 25 ft.-6 in. x 35 ft.-6 in.; Teachers Room — 14 ft.-6 in. x 24 ft. with toilet and closet; Girls' Toilet 10 ft.-10 in. x 18 ft.; Boys' Toilet — 9 ft.-6 in. x 18 ft.; Supply Closet — 5 ft.-11 in. x 24 ft.; Corridors and Locker Space.

#### Second Floor:

8 Classrooms — 23 ft. x 32 ft.-6 in.; 1 Classroom — 23 ft. x 24 ft.-6 in.; Music Room — 35 ft.-8 in. x 37 ft.; Band Room — 13 ft. x 26 ft.-6 in.; Practice Room — 9 ft.-6 in. x 10 ft.; 2 Practice Rooms — 5 ft. x 7 ft.-3 in. each; Corridors and Locker Space.

COSTS:		% of	Cost Per	Cost Per
	Cost	Total	Sq. Ft.	Cu. Ft.
Structure .....	\$288,241	70.	7.67	64.9
Plumbing, Heating & Ventilating .....	84,700	20.	2.25	19.0
Electrical .....	41,845	10.	1.11	9.4
<b>Total Construction Cost: .....</b>	<b>\$414,786</b>	<b>100.0</b>	<b>\$11.03</b>	<b>93.3</b>
Total Volume: 444,450 Cubic Feet				
Total Area: 37,600 Square Feet				
Bid Opening: July 26, 1960				

**Architects & Engineers: Alfred T. Granger Associates, Hanover, N. H.**

**General Contractor: David W. Davison, Hooksett, New Hampshire**

**Superintendent of Schools: Raymond A. Hoyt**



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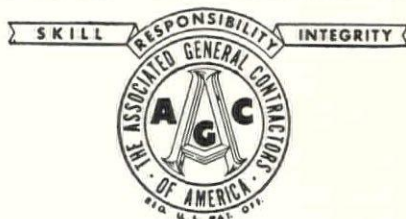
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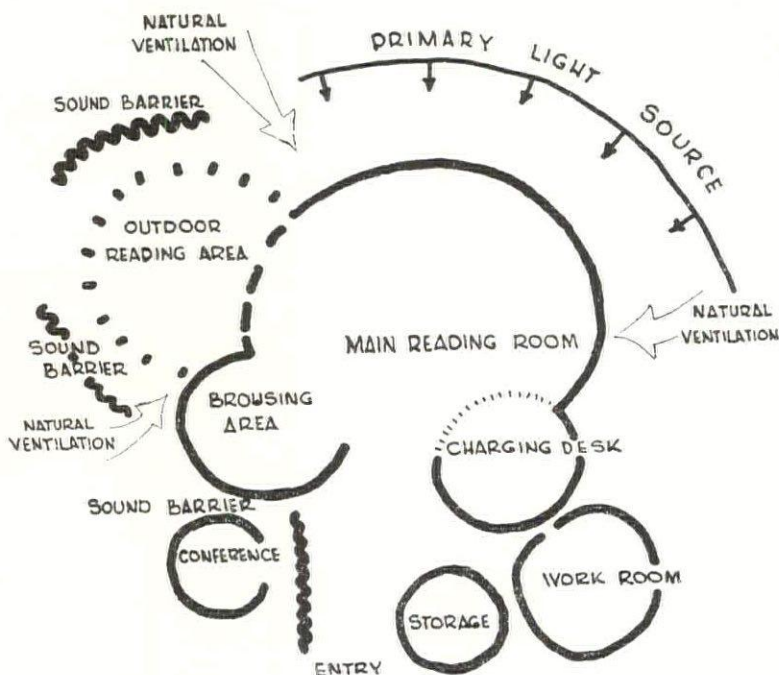
Route No. 8  
Beck Road  
Concord, N. H.

431 Turner St.  
Auburn, Maine

(Continued from page 8)  
for listening devices, shelves for teaching machines, record players, etc.

**OFFICE.** A minimum of 120 square feet should be planned for use by the librarian or her aides. It should be located near the circulation desk and equipped with files, desks, cabinets, shelves, typewriter, and chairs available for conferences.

**WORKROOM.** A minimum of 150 square feet should be planned. In the Instructional Materials Center this space is used for repairing and processing of books as well as constructing materials to be used by teachers in classroom instruction. Thus it should contain such equipment as work counters, layout tables, storage and tool cabinets, sinks duplicating machines, card catalogue for shelf list.



IT IS USUALLY BETTER TO STUDY SPACES THROUGH THE USE OF A SPACE DIAGRAM SIMILAR TO THE ABOVE, RATHER THAN AN ANALYSIS OF A PARTICULAR FLOOR PLAN. BY USING THIS TYPE OF APPROACH, THE VARIOUS ROOM USES, TRAFFIC FLOW, & CIRCULATION PROBLEMS CAN BE OBSERVED EARLIER.

INDIVIDUAL SITE PROBLEMS, ORIENTATION WITH RESPECT TO OTHER SCHOOL ELEMENTS, THE TYPE OF TERRAIN, & CLIMATE CAN ALL BE CONSIDERED WHILE DEVELOPING THIS TYPE OF DIAGRAM. THE CONVERSION TO A CONVENTIONAL PRELIMINARY FLOOR PLAN IS A SIMPLE STEP, ONCE THE SPACE DIAGRAM HAS BEEN COMPLETED.

**NOTE:** Taken from "Planning Materials Center", Bulletin 22E, State Dep't. of Education, Tallahassee, Florida. Drawings on pages 24 & 25 are from "Planning Schools for New Media", available from U. S. Dep't. Health, Education & Welfare, Office of Education.

**LIBRARY STORAGE ROOM.** Lack of storage space for back issues or periodicals is a constant source of irritation in an active library. A minimum space of 150 square feet adjacent to the reading room is needed. Worktables and shelves are the principal pieces of equipment.

**CONFERENCE ROOMS.** More and more schools are using small group work as instructional technique. The library should have group conference space where groups will

work with reference materials, with tapes and recordings, with the preparation of classroom materials. Six or eight people can be accommodated in rooms of 150 square feet. Good acoustics and proper ventilation should be provided. Conference table, chairs, storage shelves are needed.

**AUDIO-VISUAL STORAGE and PRE-VIEW ROOM.** Larger schools will readily accept the concept of the instructional materials center containing AV materials as well as



a room for examining such aids. All kinds of teaching materials should have appropriate shelving and cabinet space for storage: pictures, maps, filmstrips, films, records, tapes, transparencies, etc. A preview room need not have windows and would be used only by small groups, not by classes.

**PROFESSIONAL LIBRARY.** Although it might be possible for a small school to provide a space in its regular collection for materials for the professional teacher, a separate room for storing and use of such a collection should be considered. It would be desirable to include in this area space for teachers to create instructional materials such as projectuals, maps, models, etc.

A survey of New Hampshire school libraries made by the Department of Education in June, 1961, shows that less than a third of our schools have adequate facilities. If a school has never had a library, architects are likely to be working with a staff and perhaps a building committee that are apathetic about planning a modern library layout. During the past year some building committees have submitted library proposals that are outrageous, outmoded, and of little educational value. It would be a real service to such committees if early in their planning they could be advised to obtain some consultant help about the services of an up-to-date library; the Division of instruction can provide such consultant help.

---

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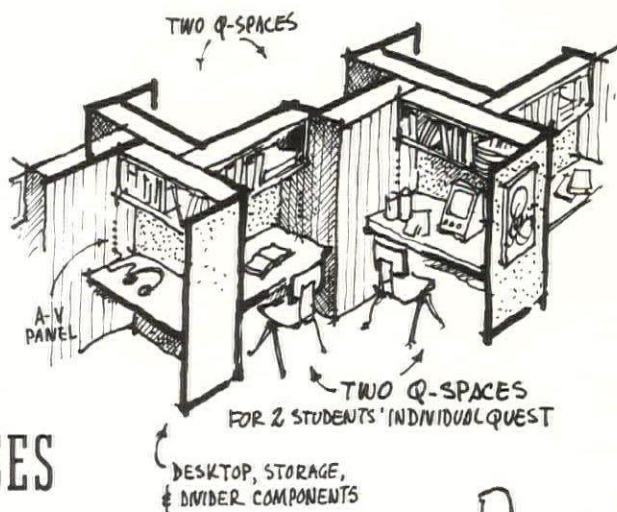
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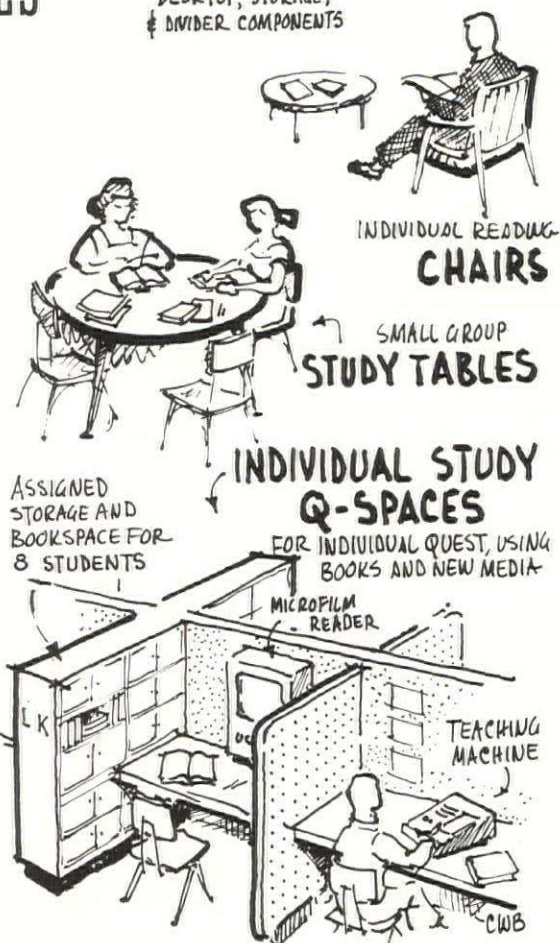
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## INDIVIDUAL STUDY SPACES

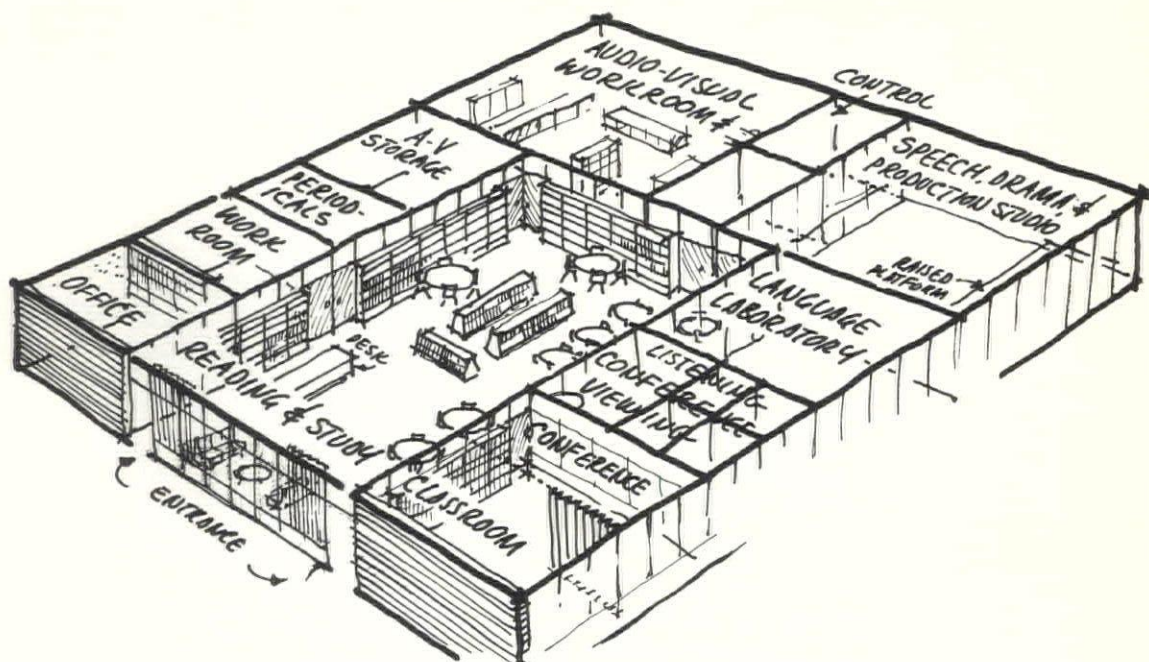


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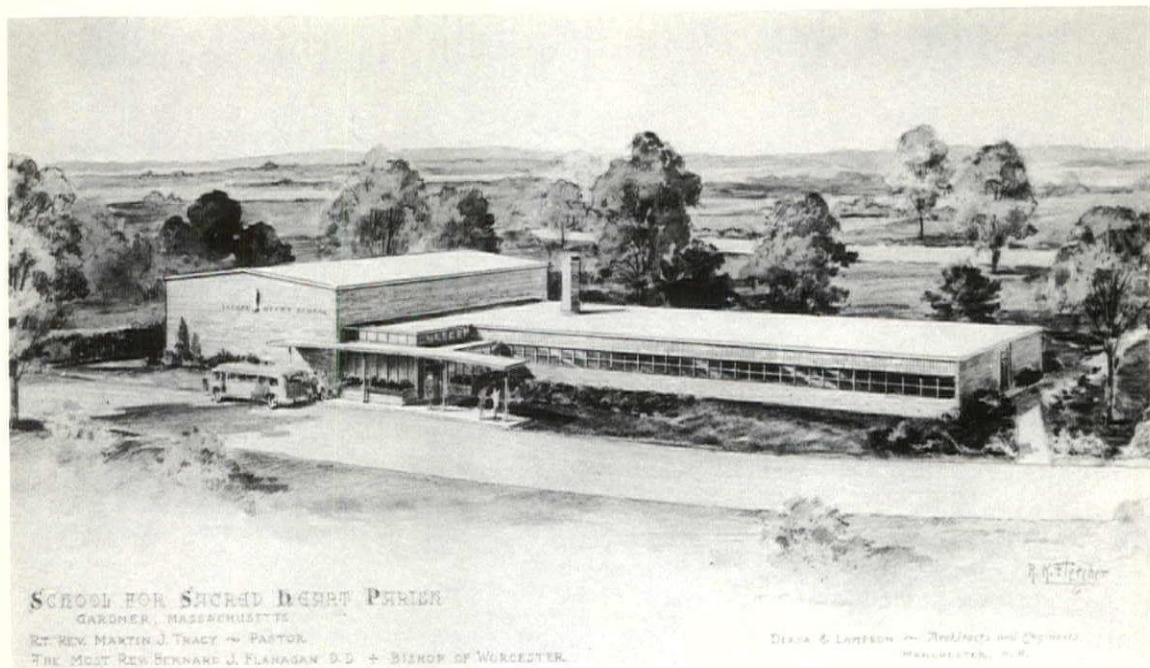
Laconia, N. H.

Tel. LA 4-5200

Plants:

Auburn, Maine

Franklin, N. H.



## ELEMENTARY SCHOOL SACRED HEART PARISH Gardner, Massachusetts

### **Description:**

Facilities provided: 8 classrooms, administrative offices, health unit, auditorium-gymnasium with stage and locker rooms. Provisions have been incorporated in the building to add on eight (8) additional second floor classrooms in the future. This school is fireproofed throughout and will have a four hour fire rating.

### **CONSTRUCTION DATA:**

Concrete foundation, concrete floor slab; brick and concrete block exterior walls, concrete block interior partitions; asphalt, vinyl asbestos and ceramic floor finishes; acoustical plaster ceilings; concrete and poured-in-place roof slabs on steel joists; 20 year tar and gravel roof; aluminum windows and glass blocks; zoned forced hot water heat; mechanical supply and exhaust ventilation; fluorescent and incandescent lighting fixtures.

CONTRACT PRICE: \$269,728.00

Date of Bid: December 2, 1960

**Dirsa & Lampron, A. I. A., Architects, Manchester, N. H.**

**Francis L. Piermarocchi, Inc., Fitchburg, Mass., General Contractor**



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## UPPER ELEMENTARY SCHOOL Hooksett, New Hampshire

### DESCRIPTION:

Facilities provided: 10 classrooms, lecture room, (which will be connected to 2 additional classrooms in the future) administrative offices, health unit, kitchen, multi-purpose room and all provisions incorporated in the present building for adding on additional classrooms and a gymnasium to convert this school into a Junior-Senior High School. The school is fireproof throughout and will have a two hour fire rating.

### CONSTRUCTION DATA:

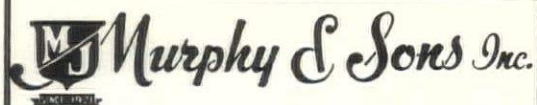
Concrete foundations; concrete floor slab; Bestone exterior walls; Glazon and concrete block interior partitions; vinyl asbestos, ceramic and quarry tile floor finishes; acoustical Fire Guard ceilings; concrete and poured-in-place gypsum roof slabs on steel joists; 25 year tar gravel roof; Kalwall panel curtain walls and windows; aluminum entrances; zoned forced hot water heat; mechanical exhaust ventilation; fluorescent and incandescent lighting.

Contract Price: \$328,352.00

Date of Bid: September 30, 1961

**Dirsa & Lampron, A. I. A., Architects, Manchester, N. H.**  
**A. Taylor Corporation, Concord, N. H., General Contractor**





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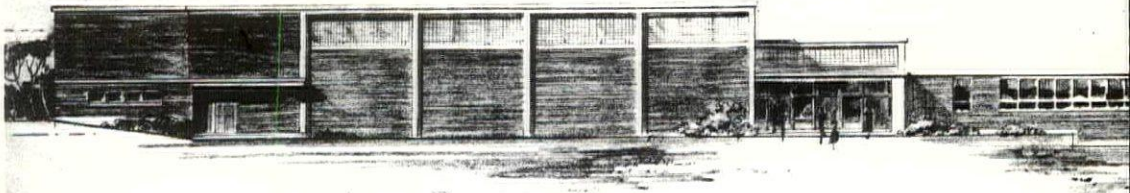
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## NEW JUNIOR HIGH SCHOOL, LACONIA, N. H.

### CONTENTS — SCHOOL PORTION

15 Classrooms—25' x 32'-10" with Teacher's Closet, Book Counter & Built-in Storage; 1 General Office—16'-8" x 25' with Counter, Public Space, Vault and 2 Store Closets; 1 Principal's Office—11'-8" x 16'-3" with Coat Closet, Toilet and 2 Storage Closets; 1 Teacher's Room—16'-10" x 25' with separate Men's and Women's Rest Room and Toilets; 1 Health Room—16'-3" x 25'-0" with Toilet; 2 Guidance Rooms—16'-3" x 25'; 2 Home Economics Rooms—Clothing—25' x 50'; Cooking—25' x 49'-6" with 5 Cooking Cubicles; Store Room—8' x 8'-10"; 2 Science Rooms—25' x 48' and 25' x 50'; 1 Preparation Room—11' x 25'; 1 Art Room—25' x 42'-6" with Closets; 1 Library—43' x 48"—Shelving 6000 books with Work Room—8'-6" x 17'-6"—Desk and Delivery; 1 General Shop—33'-9" x 50'-8" with Toilet and Storage Space; 1 Woodworking Shop—33'-9" x 50'-8" with Storage; 2 Book Storage Rooms—9' x 25'; 1 Janitor's Storage Room—16' x 25'; 2 Janitor's Closets; 2 Boys' Toilets—10' x 25'; 2 Girls' Toilets—10' x 25'; 1 Boiler Room—29' x 35' with Built-In Incinerator; 1 Grounds Equipment Room—10' x 29'; GYMNASIUM PORTION—1 Lobby—32' x 75' with Coat Room—21' x 21' with Public Toilets—Men's and Women's; 1 Ticket Booth; 1 Public Telephone Booth; 1 Gymnasium-Auditorium—90' x 124'-6"; Basketball Court—50' x 88'; Bleachers—Seating Capacity, 1280; Auditorium—Seating Capacity, 1400; Banquet Seating Capacity, 1000; 22'-0" Clearance under Concrete Girders; 1 Stage—30' x 50' with 36' width proscenium; 1 Gymnasium Storage Room—26' x 29'; 1 Boys' Physical Education Director's Room—11'-6" x 13' with Toilet, Shower and Closet—Viewing Basketball Court; 1 Visiting Team Room—14' x 24' with Gang Showers and Toilet; 1 Drying Room—13' x 18'-6"; 1 Boys' Locker Room—23' x 39'-6" with Gang Showers, Drying area and Toilet; 1 Towel Room—6' x 8'—serving both Boys and Girls; 1 Girls' Locker Room—20' x 39'-6" with Gang Showers, 2 Individual Showers and Toilet;

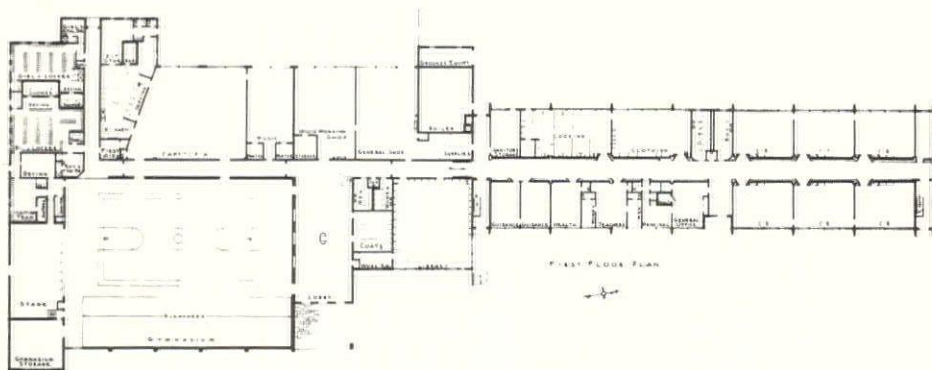
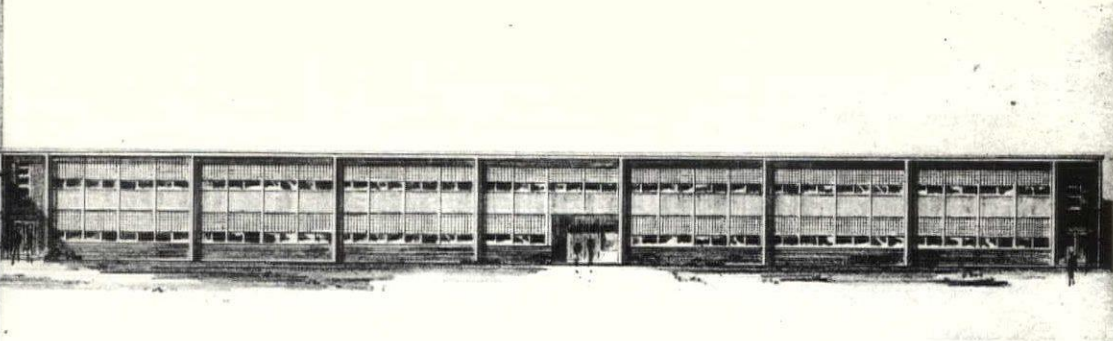
1 Girls' Athletic Director's Room—10' x 12'-6" with Shower and Toilet; 1 First Aid Room—10' x 10' with Store Closet; 1 Cafeteria—50' x 60'—Seating Capacity, 300; 1 Kitchen and Serving Area—24' x 40', Food Storage—14' x 25', Walk-in Refrigerator, 8' x 11', Help's Toilet, Janitor's Closet and Help's Locker Area; 1 Music Room—25' x 41', 2 Practice Rooms—8' x 9', 4 Janitor's Closets.

### CONSTRUCTION MATERIALS:

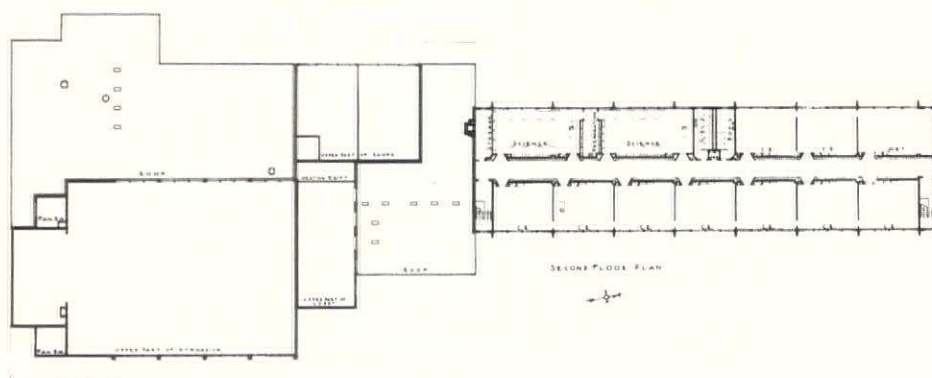
Footings and Foundations—Concrete, reinforced; Outside Walls—Waterstruck Brick backed up with concrete block; Framing—Entirely Fire-proof—Prestressed Concrete, 2nd Floor and Roofs, double-tee prestressed concrete, Prestressed Girders, beams and slabs, Precast Concrete, outside and inside columns; First Floor Construction—concrete slab on earth, reinforced and waterproofed; Spandrels between Floors—two-story school portion—Insulated, corrugated aluminum panels; Windows—Aluminum projected sash and aluminum ribbon windows with glass block; Roofing—Tar and Gravel, 20 year bond over insulated concrete and fibre glass; Flashing—16 oz. copper; thru-wall to be fabric; Interior Partitions—Concrete Block, painted; Corridor Walls—Glazed tile dado at height of built-in recessed lockers (620 lockers); Lobby Walls—Duraglaze concrete block; Flooring—Plastic Tile, Slate and Ceramic Tile, Gymnasium and Stage Floor, Wood; Door Bucks and Trim—16 Gauge metal; Ceilings—Double-tee concrete acoustically treated, Corridor Ceilings, acoustical tile; Doors—Outside, 2¼" white pine, painted, Inside, Solid core flush veneer; Heating—Forced Hot Water, vulcan radiation, zone and temperature controlled; Ventilation—Classrooms, Gymnasium, Cafeteria, Locker Rooms, etc., to be ventilated by electrically operated fans, galvanized iron ducts; Plumbing—Standard school requirements, meeting all State plumbing codes; Electric—Wiring, Romex; Shops to have aluminum plug-in busway; Fixtures—Incandescent and Fluorescent.

ITEM	Cost	% of Total Cost	Cost Per Sq. Ft.	Cost Per Cu. Ft.
STRUCTURE.....	\$ 726,961.00	74.0	\$10.32	\$ .56
HEAT., VENT., PLUMB.....	150,000.00	15.5	2.17	.12
ELECTRICAL.....	105,800.00	10.5	1.46	.08
<b>TOTAL COST OF BUILDING.....</b>	<b>\$982,761.00</b>	<b>100.0</b>	<b>\$13.95</b>	<b>\$0.76</b>
Grading, Drives, Walks and Parking Area.....	13,430.00			
Kitchen Equipment included.....	6,109.00			
<b>TOTAL AMOUNT.....</b>	<b>\$1,002,300.00</b>			





JUNIOR HIGH SCHOOL - LACONIA, NEW HAMPSHIRE



TOTAL VOLUME: 1,296,273 cu. ft.—TOTAL AREA: 70,400 sq. ft.—  
 BID OPENING: July 7, 1960 — CLASSROOM CEILING HEIGHT: 9'-8"—  
 GYMNASIUM HEIGHT: From floor to bottom of prestressed concrete  
 girders - 22'-0"—

**Alfred T. Granger Associates, A.I.A., Architects and Engineers**  
**Hanover, N. H.**

**HARVEY CONSTRUCTION COMPANY, MANCHESTER, N. H.**  
**GENERAL CONTRACTOR**

**SUPERINTENDENT OF SCHOOLS: KENNETH L. SHERMAN**

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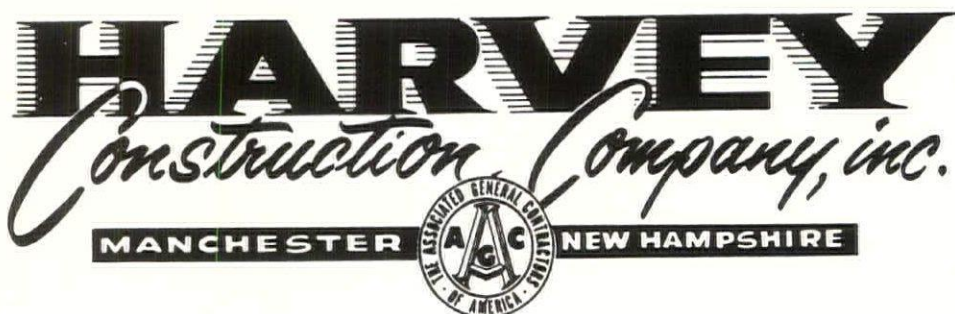
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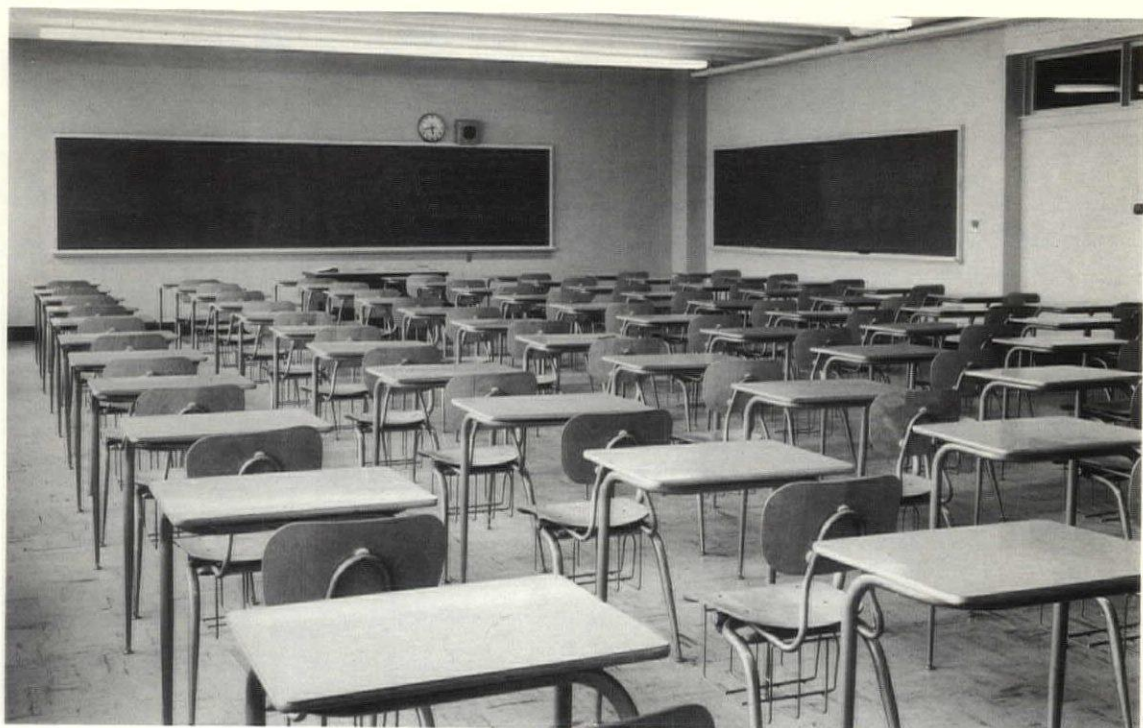
**Tel. NA 2-3745**

**Two HARVEY BUILT**  
SCHOOLS IN THIS ISSUE

**Laconia Junior High School**  
**Laconia, N. H.**

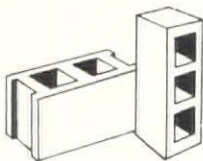
**Rochester Junior High School**  
**Rochester, N. H.**





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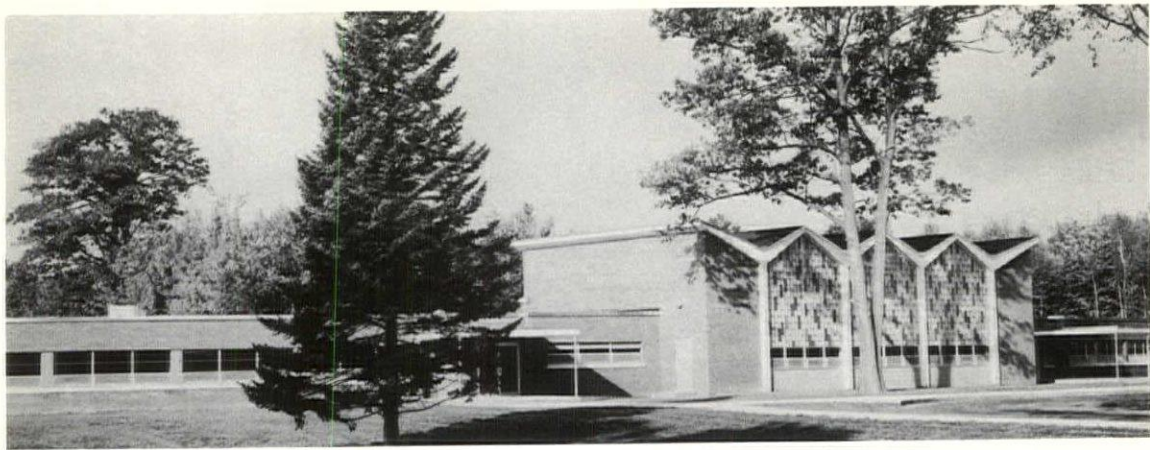
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## ELM STREET SCHOOL, Lakeport, N. H.

(Laconia School District)



This building was designed to follow the top of a ridge. The activity room is in the center so that lower grades have one end of the building and upper grades have the other end, each group having its own toilets.

### DESCRIPTION:

Site work included removing trees, finish grading, paving walks, drive, and parking area. Reinforced concrete foundation walls; damp proofed reinforced concrete floor slab on gravel fill. Exterior walls Norlite blocks faced with brick. Interior partitions Norlite blocks with Glazon dados in corridors and boys' and girls' toilets. Roof framing steel joists and Insulrock roof slabs; 20 year roof; aluminum coping; aluminum sash with tinted glare-free glass. Kalwall plastic curtain walls with

colored inserts in activity room. Steel and aluminum exterior doors; wood interior doors. Corridor ceiling is suspended incombustible acoustical tile. Asphalt tile on floors except ceramic tile in all toilets. Light proof window shades. Metal toilet partitions. Aluminum flag pole; 2 movable wardrobe units and one steel storage cabinet in each classroom; movable table-bench combinations in activity room; gas fired incinerator; forced hot water heating system with individual room controls; mechanical ventilation; hot and cold water to each lavatory including those in classrooms; drinking fountain in each classroom; dishwasher in kitchen. Lighting fixtures in general are fluorescent; communication system; fire alarm system; automatic fire detection in storage areas; underground electric entrance.

ITEM	Cost	% of Total Cost	Cost Per square foot
Structure .....	\$205,305.00	78.3	\$ 9.35
Heating and Ventilating .....	28,779.00	11.0	1.31
Plumbing .....	9,639.00	3.7	.44
Electric .....	18,250.00	7.0	.83
	<hr/> \$261,973.00	<hr/> 100.0	<hr/> \$11.93

Time of Bids: December 15, 1960

Total area: 21,966 square feet

Total volume: 263,156 cubic feet

**Norman P. Randlett, A. I. A., Architect, Laconia, New Hampshire**

**Winston P. Titus, Laconia, N. H., General Contractor**



N  
↑  
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# The Language Laboratory

## Considerations for Administrators and Architects

by F. André Paquette, Director Foreign Language Instruction  
State Department of Education, Concord, New Hampshire

The last decade and one half have been accompanied by a large-scale introduction of technology into many classrooms. Without a doubt, the language classroom has experienced a greater increased use of electro-mechanical devices than has any other area of the curriculum. The value of a language laboratory (electronic classroom) is unquestioned because its use is based on sound theory of language learning. For this reason, it is imperative that we explore some basic considerations for the design and construction of any type of language laboratory.

### Location

The student of a modern foreign language will be required to hear and to imitate sounds and groups of sounds which he has never heard before. This suggests that an attempt to avoid noise from outside the school as well as from inside the school is necessary. The laboratory should be located away from traffic or playgrounds, and away from the gymnasium, auditorium, cafeteria, and main corridors.

The laboratory should be centrally located to all *language* classrooms, i.e., it might be the center room of three, where direct passage is possible without use of the corridor. Even if current enrollments require only two rooms, it would be wise to locate the laboratory in this arrangement in view of expansion. Where a multiple-story structure is in use or planned, it may be desirable to consider the top floor as the proper place for the laboratory.

Even if all of the above conditions are satisfied — the exception rather than the rule — additional consideration must be given to sound control.

### Sound Control

Recommendations for acoustical treatment of the language laboratory should be made by an architect. He should specify treatment of the following areas in his plans:

1. Doors: Sound resistant and automatic, silent closing.
2. Ceiling: Acoustically treated. Special attention should be given to the fire flashing characteristics of cellulose fiber tile as compared to those of mineral fiber acoustical tile. We would recommend the use of the latter to assure that all local and state fire regulations are adhered to.
3. Walls: It is possible to avoid treatment of walls by building them slightly off parallel.
4. Floor: Consideration may be given to cork floors if the architect feels it desirable.

5. Windows: Avoidance of excessive window area will reduce outside noise as well as minimize distractions.

### Lighting

Incandescent lighting is strongly recommended for the language laboratory. If fluorescent lighting is required, it must be of the low-noise ballast type and should be installed with shielded cable and special components.

Windows should be equipped with shades or venetian blinds.

### Ventilation

The heat generated by normal use of laboratory equipment, as well as visual aids, makes forced ventilation imperative. It should be noted that certain ventilation systems are very effective but produce much noise — these are to be avoided. An architect will specify the types of systems which are least likely to present this problem.

### Wiring

1. Conduits should be large enough to permit pulling through of all audio lines required.
2. The equipment supplier will provide all audio wiring.
3. The electrical contractor will install all power circuits.
4. Power wiring should be separate from all audio wiring to avoid picking up of AC hum and interference.
5. Floor troughs for conduits should be protected against water entering accidentally.
6. Power lines for all laboratory equipment should be separate from all other power lines such as for lighting, etc.
7. It is recommended that not more than ten student positions be fed from each fifteen ampere branch circuit.
8. Conduits for power and audio lines for all laboratory equipment should be linked to the Console position. This should include power and audio lines to the rear of the room for use with projection equipment. (See Diagram)

The overall design for the language laboratory should provide space for the following:

1. Student Positions
2. Center and Side Aisles
3. Projection Area
4. Visual Aid Storage
5. Console and Teacher Station Area
6. Workbench and General Storage
7. Tape Cabinet
8. Projection Screen



9. Student Book Racks
10. Door space and door swing space

In considering space requirements for the above and their arrangements, the following information should be considered by the architect.

1. A minimum of 12.5 square feet per student position. This will provide for booth space, chair space and row space 2.5' wide and 5' deep.
2. Center and side aisles at least 3' wide are highly desirable. Adequate aisle space reduces walking noise and improves supervisory control. The center aisle is necessary for use of certain types of projection equipment.
3. The projection area should be at least 3' wide so that mobile visual equipment may be used. (See special notes for this area under Wiring).
4. Storage for visual aids such as films, filmstrips, slides, and projection equipment should be located in the "Projection Area."
5. Consoles differ in size but rarely exceed 3' x 6' in overall dimensions. A Console should be located in the front of the classroom so that unobstructed vision between each student position and the teacher is possible. It may be placed in either the central position or at one side. However, interference with student vision of the

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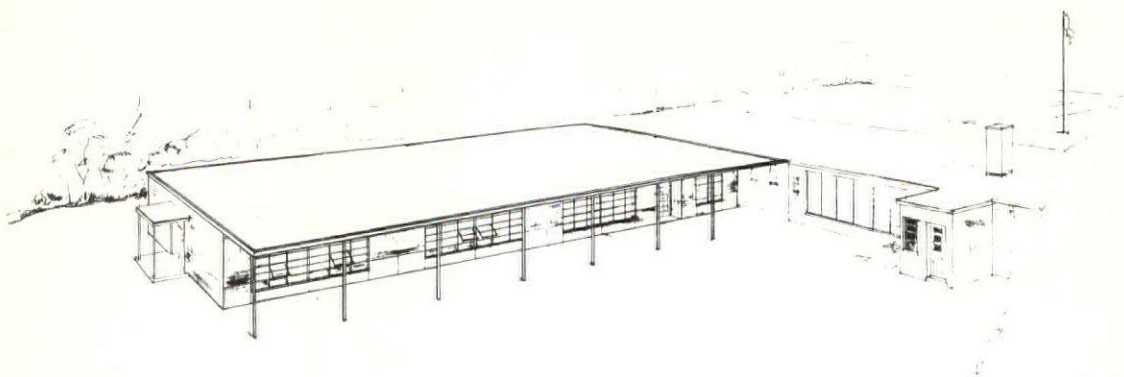
Projection Screen (See No. 8 below) should be considered. Unobstructed teacher vision may be possible from an off-center position by placing the Console on a raised platform.

6. The workbench and general storage area may be located anywhere in the laboratory but should be at least 9' to 12' from the Console, the nearest student position, and the tape storage cabinet. This is necessary because certain electromagnets used to erase tapes may demagnetize heads of tape recorders or affect the quality of master tapes. The workbench sur-

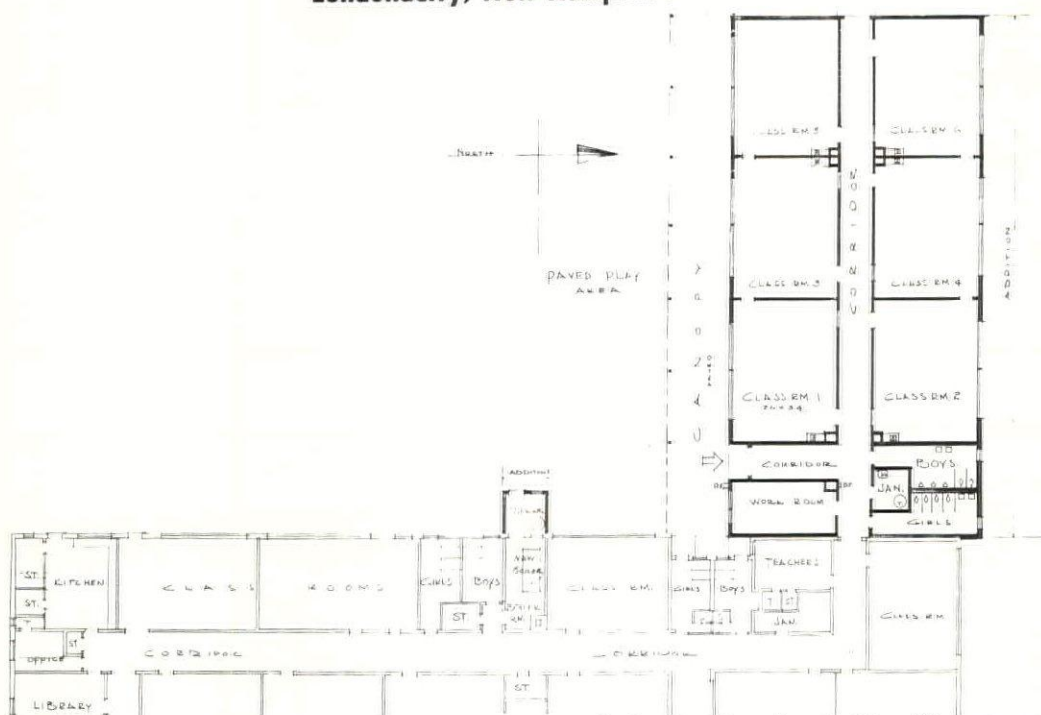
face should be of formica, texalite, or other durable material.

7. The tape storage cabinet should be located near the Console and away from the workbench. It should be of a standard size to store 3", 5", 7" reels of tapes in boxes. It must have a secure locking feature as should all storage cabinets in a language laboratory. It is imperative that the tape storage cabinet be located so as to avoid extreme changes in temperature. Under no circumstances should it be near a source of heat.

(Continued on Page 53)



**Addition to  
LONDONDERRY CENTRAL SCHOOL  
Londonderry, New Hampshire**



**DESCRIPTION:**

Footings & foundation; reinforced concrete, exterior walls; brick veneer & Norlite block, Interior partitions; Norlite block, Floors; reinforced slab on grade, Toilet rooms; Ceramic tile, Roof construction; Structural steel frame, Jr. beams, precast insulating roof deck, 20 year built-up roofing, Windows; Aluminum sash, Ceilings; Incombustible

acoustical tile, Interior finish; Masonry walls painted, Toilet rooms; 4 ft. ceramic tile dado, Heating; Forced hot water system, 2 zone, new boiler, Plumbing; Standard fixtures, sink cabinets in classrooms, Electrical; Fluorescent lighting in classrooms, fire alarm system existing building and addition, extension of existing program system, sitework and paved play area.

ITEM	Cost	% of Total cost	Cost Per Sq. Ft.
Structure .....	\$70,488.00	73.	\$ 7.91
Plumbing, Heating & Ventilating .....	19,500.00	20.	2.17
Electrical .....	6,500.00	7.	.76
<b>Total Cost of Building .....</b>	<b>\$96,488.00</b>	<b>100.</b>	<b>\$10.84</b>

Area: 8,890 Sq. Ft.

Date of Bid: September, 1960

**Alexander J. Majeski, A. I. A., Architect, Manchester, N. H.**

**Gamache Construction Co., Inc., Manchester, N. H., General Contractor**



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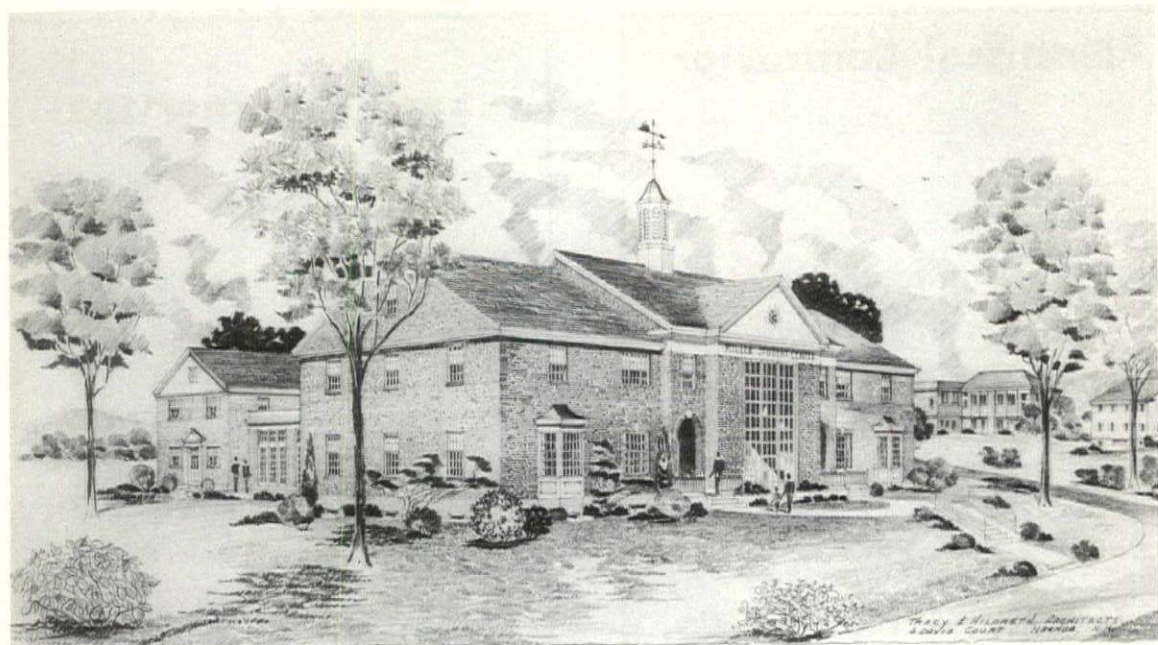
MANCHESTER, N. H.

NA 3-0262

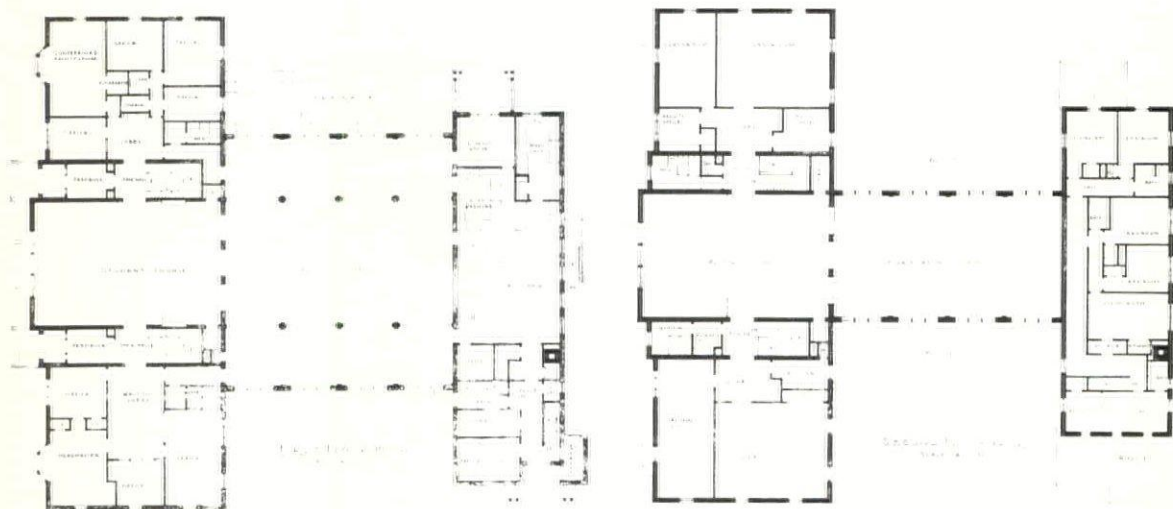
## **General Contractor**

FOR

**LONDONDERRY CENTRAL  
SCHOOL ADDITION  
Londonderry, N. H.**



## MILLER STUDENT CENTER Kimball Union Academy, Meriden, N. H.



### FUNCTION:

As its name suggests this new building was planned as the center of activities for the 180 boys who comprise the student body of this preparatory school. Among the building's facilities are the following: Dining Hall to seat 220; Private Dining Room; Kitchen, Dishwash, etc.; Student Lounge; Alumni Lounge, Administrative Offices, Staff Apartments; Lecture Hall; Music Department; Language Laboratory; Crafts room & Dark Room; Teachers' Offices; Conference Rooms; School Store.

### STRUCTURE & MATERIALS:

The building was designed to harmonize with

other buildings on the campus by using a modified Georgian style. Among its structural and materials features are the following: Foundations: Concrete. Frame: Steel and reinforced concrete. Walls: Brick with masonry block backers. Windows: Wood double-hung. Floors: Concrete slabs with resilient floorings except tile in toiletrooms, kitchen, etc. Ceilings: Generally acoustical tile; plaster in toilet rooms, kitchen, etc. Flat Roofs: Built-up, 20-year roofing. Sloping Roofs: Heavy strip shingles. Heating: Zoned, forced hot water system; radiant panels in floor of dining hall. Air Conditioning: Summer cooling in Lecture Hall.

**Tracy & Hildreth, A.I.A., Architects, Nashua, N. H.**  
**The MacMillan Co., Inc., General Contractors, Keen, N. H.**



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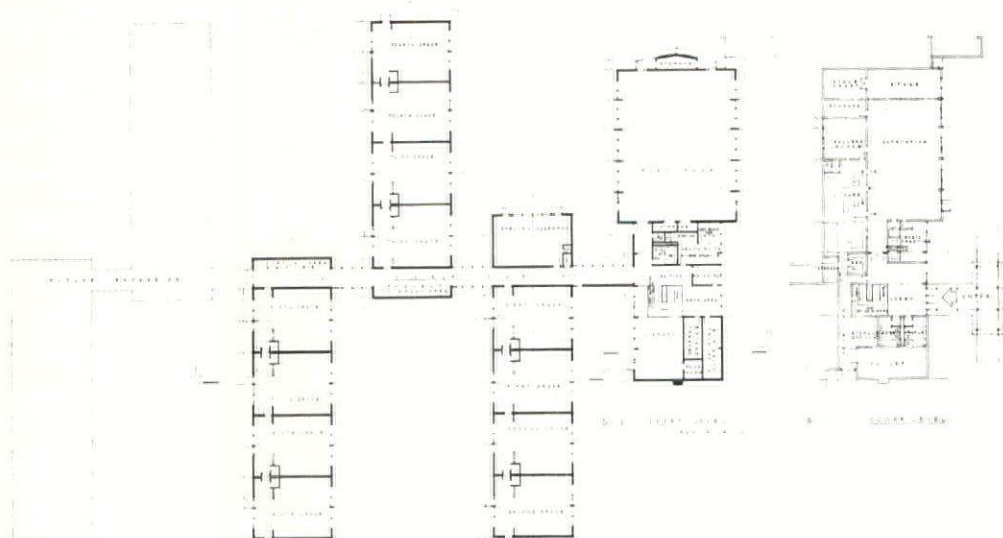
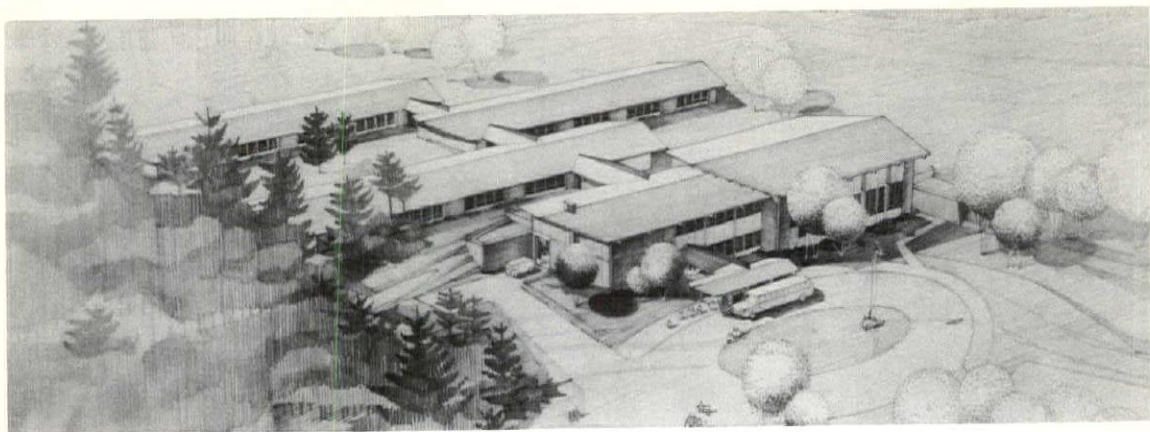
**Gymnasium-Auditorium, New Hampton School**

**Library & Science Bldg., Proctor Academy**

**Miller Student Center, Kimball Union Academy**

**KEENE, N. H.**

**ELmwood 2-3070**



## PROPOSED ELEMENTARY SCHOOL

### Nashua, New Hampshire

Shown here is a perspective view and plan of the preliminary proposal for the new Nashua Elementary School to be located in the Broad Street Area. The school is planned for construction 1962 and includes twelve regular classrooms, one special classroom, Library, Health Suite, and Administrative Offices, a large playroom, in addition to Kitchen, Cafetorium with stage, Music Practice Room, Instrument storage, Art Alcove, and teacher's Dining Room.

The proposed site is a large wooded ten-acre tract and the school has been located to take advantage of the slope with the entrance, Kitchen and Cafetorium facilities on a lower level and the

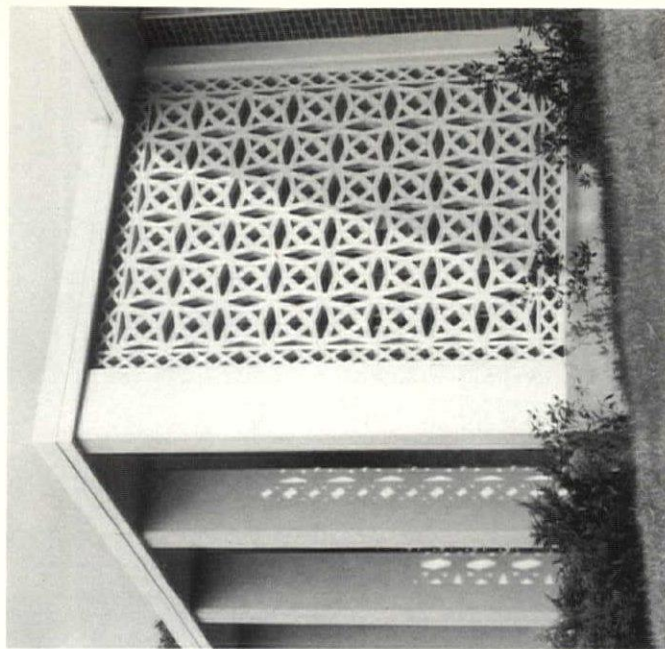
other facilities on an upper level but with all classrooms opening out on grade. The corridor-less classroom wing approach has been used which has the advantage of an additional teaching space in each classroom, self-contained toilet and wardrobe facilities, and also interconnecting doors to facilitate new teaching methods such as Team Teaching. Each classroom orients both North and South with individual classroom entrances from the exterior. The building mass has been spread out in a finger plan to keep the building more nearly in scale with the young children and to avoid "factory for education" appearance.

**Carter & Woodruff, A. I. A., Architects, Nashua, N. H.**

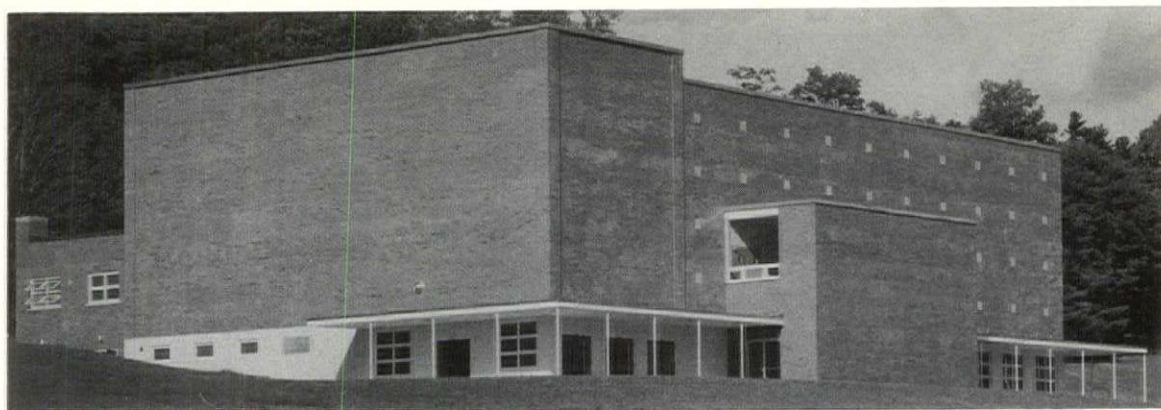


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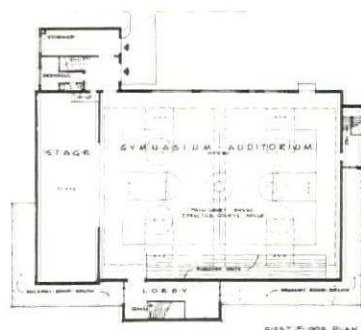
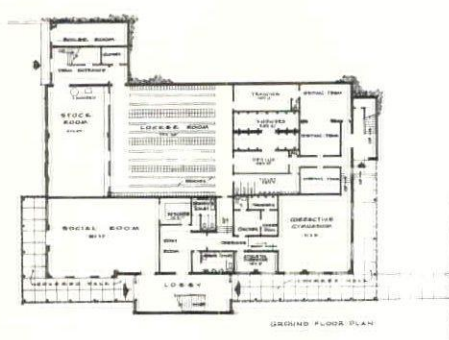


**see    DURACRETE**



## FREDERICK SMITH HALL

### The New Hampton School • New Hampton, N. H.



Construction of the gymnasium-auditorium for use by the boys who attend this private preparatory school was commenced late in the fall of 1960 and was completed in August, 1961.

#### Description

The structure is on a sloping site so that both floors are at ground level. Exterior walls of the lower story are reinforced concrete; upper story walls Norlite blocks faced with brick. Interior partitions Norlite blocks with Glazon units in shower rooms, drying room, locker room toilet. Lower floor reinforced concrete on gravel; structural steel frame; wood joists under upper floor; wood plank on roof; reinforced concrete stairs. Rigid insulation on roof with 20 year roofing;

aluminum coping. Wood sash. Doors steel, aluminum, and gypsum-core wood. Both acoustical tile and smooth tile on gymnasium ceiling with acoustical treatment on wall opposite stage. Gymnasium floor maple; ceramic tile in showers, drying rooms, toilets; elsewhere vinyl corlon sheet flooring and colored concrete. Metal toilet partitions. Oak paneling in social room and entrance lobby. Six basket ball backstops. Folding bleachers. Heating and ventilating includes 2-pipe vapor system, steam generator, mechanical exhausts. In boys' shower two shower heads for cold water only, remaining heads tempered warm water only; automatic soap system. Lighting fixtures in general are recessed. Building completely sprinklered.

ITEM	Cost	% of Total Cost	Cost per sq. ft.	Cost per cu. ft.
Structure .....	\$263,751.00	76.6	\$ 9.82	\$ .495
Heating & Ventilating .....	39,880.00	11.6	1.49	.075
Plumbing .....	18,000.00	5.2	.67	.034
Sprinklers .....	6,040.00	1.8	.23	.011
Electrical .....	16,450.00	4.8	.61	.031
	<hr/> \$344,121.00	<hr/> 100.0	<hr/> \$12.82	<hr/> \$ .646

Time of Bids: November 15, 1960

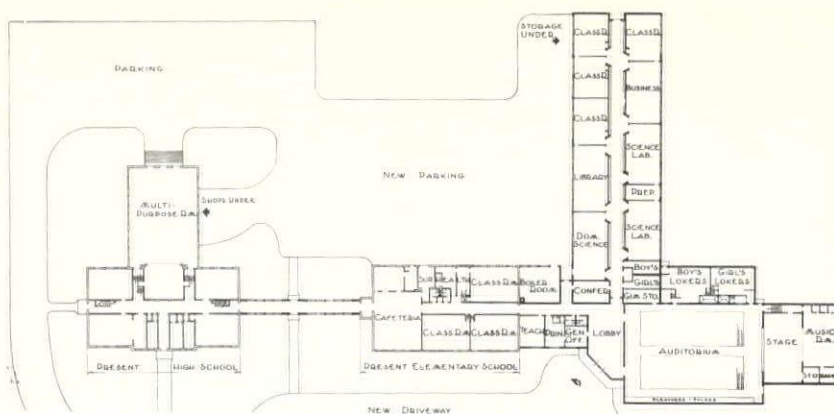
Total Volume: 532,750 cu. ft.

Total Area: 26,833 sq. ft.

**Norman P. Randlett, A. I. A., Architect, Laconia, New Hampshire**

**The MacMillin Co., Inc., Keene, N. H., General Contractors**





## NEW HIGH SCHOOL ADDITION

### New London, New Hampshire

#### CONTENTS:

Three Classrooms — 25 ft. x 30 ft.; One Classroom — 25 ft. x 33 ft. Business Room — 25 ft. x 44 ft. 2 in., partitioned to form separate Typing Room and Bookkeeping Room. Two Science Laboratories — 25 ft. x 41 ft. each. Two Science preparation Rooms — 10 ft. x 14 ft. and 10 ft. x 10 ft. 6 in. Boys' Toilet — 9 ft. x 19 ft. 6 in. Janitor's Closet with trough. Library — 25 ft. x 56 ft. Domestic Science Room — 25 ft. x 48 ft. Lobby — 22 ft. x 45 ft. (approx.). General Office — 12 ft. x 20 ft. 2 in. Principal's Office — 13 ft. 6 in. x 14 ft. 6 in. Guidance Room — 8 ft. 6 in. x 18 ft. 4 in. Teacher's Room — 13 ft. 6 in. x 18 ft. — with closet. Men's Toilet — 7 ft. x 9 ft. 8 in.; Women's Toilet — 7 ft. x 9 ft. 8 in. Gymnasium-Auditorium — 70 ft. x 100 ft. Stage — 27 ft. x 49 ft. 4 in.; Music Room — 24 ft. x 36 ft. Three practice Rooms — 6 ft. x 8 ft. each; Stage Storage — 10 ft. x 11 ft. 9 in. Band Storage — 10 ft. x 11 ft. 9 in.; Gym Storage — 11 ft. 2 in. x 26 ft. 4 in. Boys' Locker Room — 17 ft. x 35 ft. 4 in. with toilet. Boys' Shower — 7 ft. 4 in. x 14 ft. 6 in.; Boys' Drying Room — 7 ft. x 8 ft. 6 in. Boys' Athletic Director's Room — 7 ft. x 15 ft. with shower. Girls' Locker Room — 17 ft. x 29 ft. 8 in. — with toilet & individual shower. Girls' Shower — 7 ft. 4 in. x 9 ft.; Girls' Drying Room 6 ft. 6 in. x 7 ft. Girls' Athletic Director's Room — 7 ft. x 7 ft. 6 in. with shower.

Boiler Room — 22 ft. 6 in. x 24 ft.; Supply Room — 8 ft. x 19 ft. Connecting Corridor between present High School and present Elementary School — 8 ft. x 88 ft.

#### CONSTRUCTION MATERIALS:

Footings & Foundation Walls — Reinforced concrete. Exterior Walls — Sandstruck brick, backed up with concrete block. Roof Construction — 2 in. x 14 in. Douglas Fir rafters, boarded, insulated, with 20-yr. bonded tar and gravel roofing. Floor Construction — Reinforced concrete slab on earth covered with plastic, asphalt, cork or ceramic tile or slate where called for. Flashing — 16 oz. copper; Gravel Stop & Drip Edge — Aluminum. Windows — Aluminum projected type. Interior Partitions — Concrete block, painted; Glazon in Lobby; Structural Glazed Tile in Corridors; Ceramic Tile walls or Dadoes in Showers and Toilets. Door Bucks & Trim Combinations — 16 ga. metal. Doors Outside, white pine; Inside, Birch Veneer, solid-core, flush-type. Ceilings — Acoustical tile units, 12 in. x 12 in.; Sheetrock in Stage and toilets; Asbestos Cement Board in Boiler Room; Transite Board in showers. Heating — Forced Hot water with fin radiation; rooms temperature-controlled and zoned. Plumbing — Standard sizes, meeting all state requirements. Electric — Fluorescent and flush lighting; Romex wiring.

#### COSTS:

Item	Cost	% of Total Cost	Cost Per Sq. Ft.	Cost Per Cu. Ft.
Structure .....	\$292,498	70.4	\$ 9.68	\$ .50
Heating & Ventilating .....	58,359	14.0	1.93	.10
Plumbing .....	24,795	6.0	.82	.04
Electrical .....	39,872	9.6	1.32	.06
<b>Total Construction Cost:</b> .....	<b>\$415,524</b>	<b>100.0</b>	<b>\$13.75</b>	<b>\$ .70</b>

Total Volume: 585,852 Cu. Ft.

Total Area: 30,204 Sq. Ft.

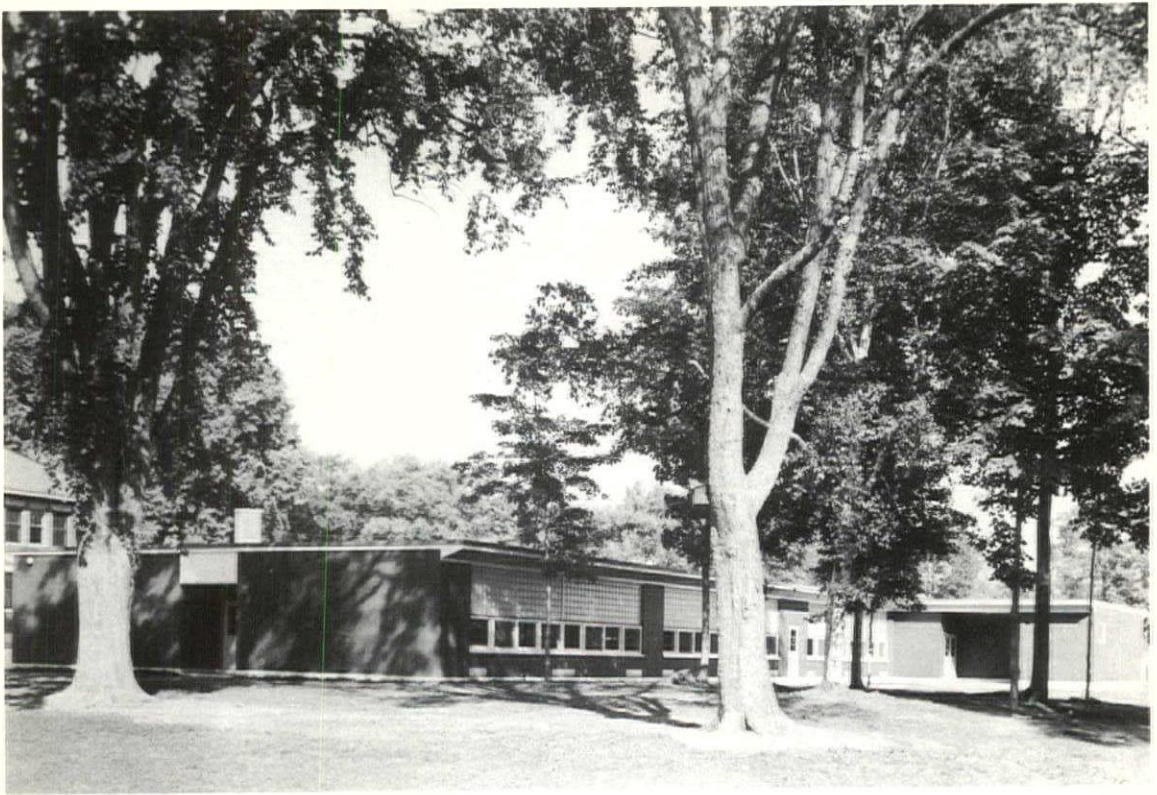
Bid Opening: June 20, 1961

**Architects & Engineers: Alfred T. Granger Associates, Hanover, N. H.**

**General Contractor: R. E. Bean Construction Co., Inc., Keene, N. H.**

**Superintendent of Schools: Gordon Flint**





## NORWICH ELEMENTARY SCHOOL

### Norwich, Vermont

#### DESCRIPTION:

Foundation — reinforced concrete; Exterior Walls — concrete block painted; Interior Partitions — concrete block painted; Roof Framing — steel bar joist with two inch wood deck over; Roof — insulated 20 year tar and gravel; Floor — damp-proofed concrete slab on earth; Floor Covering — vinyl asbestos tile; Windows — Andersen sash with

glass block over; Ceiling — suspended acoustical tile; Millwork — custom built wardrobes and cabinets; Heating — oil fired hot water, window line radiation with fresh air unit ventilators; Lighting — fluorescent strips; Plumbing — toilet, project sinks and drinking fountains for each classroom, new septic system.

ITEM	Cost	% of Total Cost	Cost Per sq. Foot	Cost Per cu. Foot
Structure .....	\$ 64,894.00	60.4	8.50	.545
Heating & Plumbing .....	\$ 36,900.00	34.3	4.84	.31
Electrical .....	\$ 8,250.00	05.3	.75	.048
	\$107,474.00	100%	14.09	.903
	\$ 4,175.00	Remodeling Multi-Purpose Room & Relocating Existing Boiler		
<b>Total Contract Price .....</b>	<b>\$111,649.00</b>			

Total Volume: 118,700 cu. ft.      Floor Area: 7,620 sq. ft.      Date of Bid: May 11, 1960

**W. Brooke Fleck, A. I. A., Architect, Hanover, N. H.**

**General Contractor: R. E. Bean Construction Co., Inc., Keene, N. H.**



**We Were**  
**Electrical Contractors**  
on the  
**Norwich**  
**Elementary School**  
**Norwich, Vermont**



**NORWICH ELECTRIC**  
**Electrical Contracting**  
**East Thetford, Vermont**

PHONE: THETFORD  
STERLING 5-7252

## **MILLWORK**

For

**READSBORO, VT.**  
**Elementary School**

— Furnished by —

**JOHN F. CHICK**  
**& SON, INC.**

SILVER LAKE, N. H.

Tel FOrrest 7-4611

**R. E. BEAN** **CONSTRUCTION CO., INC.**

29 Island St. Keene, N. H.

**GENERAL CONTRACTOR**  
for

**New High School Addition, New London, N. H.**  
**Elementary School, Readsboro, Vt.**  
**Norwich Elementary School, Norwich, Vt.**  
**Elementary School, Notre Dame Parish,**  
**St. Johnsbury, Vt.**

INDUSTRIAL — COMMERCIAL — RESIDENTIAL BUILDING



## ELEMENTARY SCHOOL ADDITION

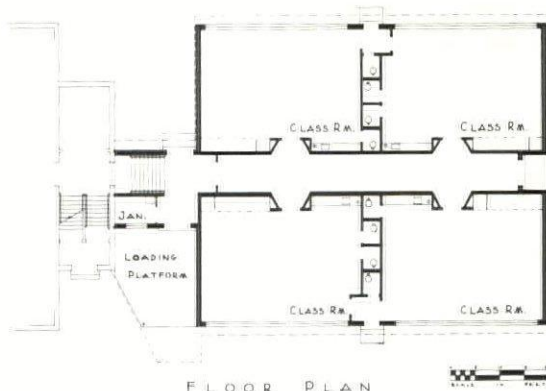
Pittsford, Vermont

### CONTENTS:

This addition is connected to the northerly wall of present Lothrop school by a corridor and stairwell and contains: 4 Classrooms — 25 ft. x 33 ft., 9 ft. Ceiling Height. Recessed entrances to classrooms from corridor; 2 Toilets off each classroom; direct exit to outside from classrooms; Built-In Wardrobes with Teacher's Closet; Sink & bubbler unit in counter space with shelves; 16' length chalkboard; 40 lin. ft. of tackboards. Janitor's Closet — 5 ft. 6 in. x 8 ft. 6 in., with slop sink & shelves.

### CONSTRUCTION MATERIALS:

Foundation Walls & Footings — Reinforced concrete. Exterior Walls — Sand struck brick to match present school, backed up with load-bearing Concrete block. Floor Construction — Reinforced integral waterproofed concrete slab on earth with floor covering of vinyl plastic tile. Roof Construction — 2" x 14" roof rafters, 1/2" plywood roof sheathing, insulation and 20-year bonded tar and gravel roof. Flashing — 16 oz. copper. Windows — Glass block and aluminum ribbon windows. Interior Partitions — Concrete block, painted; Corridors — Glazon dados. Door Bucks — Metal



trim & door buck combinations, 16 gauge. Doors — Outside, White Pine; Inside, Birch veneer, solid-core, Flush-type, glazed where shown. Ceilings — Acoustical tile units, 12" x 12". Heating — Vapor steam (same as in present school) with fin radiation, unit ventilators. Classrooms temperature controlled. Plumbing — Meeting State requirements; standard school size fixtures. Electric — Fluorescent in classrooms; flush lighting in corridors; Wiring — Romex.

### COSTS:

Item	Cost	% of Total Cost	Cost Per Sq. Ft.	Cost Per Cu. Ft.
Structure .....	\$51,893	77.9	\$10.42	\$ .694
Heating & Ventilating .....	7,650	11.5	1.54	.102
Plumbing .....	3,234	4.9	.65	.043
Electric .....	3,850	5.7	.77	.051
<b>Total Construction Cost:</b>	<b>\$66,627</b>	<b>100.0</b>	<b>\$13.38</b>	<b>\$0.89</b>

Bid Opening: May 26, 1961

Total Volume: 74,715 Cu. Ft.

Total Area: 4,981 Sq. Ft.

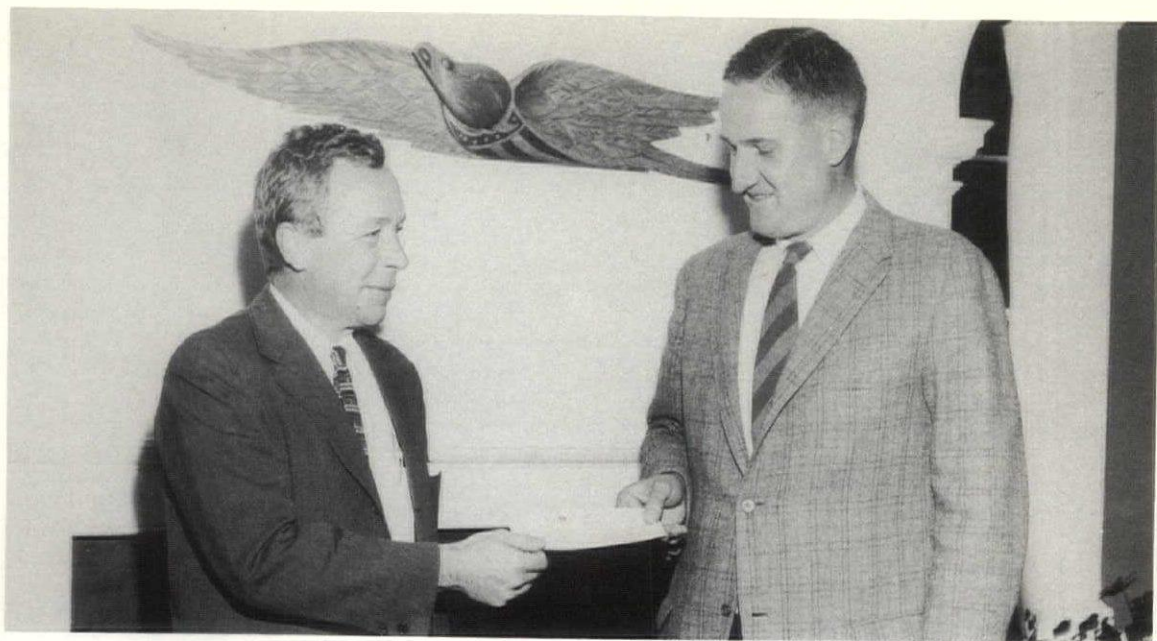
Classroom Ceiling Height: 9 Ft.

**Architects & Engineers: Alfred T. Granger Associates, Hanover, N. H.**

**Contractor: Donald C. Noyes, Rutland, Vermont**

**Superintendent of Schools: John R. Burnett**





Horace G. Bradt, A I A, is the recipient of a check in the amount of \$500.00 from James B. Peirce, A G C. Mr. Peirce presented the check on behalf of A G C to the Boston Architectural Center. New quarters for the B A C are necessary due to land acquisition by the State of Massachusetts.

Mr. Bradt, chairman of the drive in New Hampshire for B A C reported gifts amounting to \$1335.00. Other contributors listed were Walter T. Williams, Allen C. Clarkson, Andrew C. Isaak, Stanley Orcutt and Maurice E. Witmer. Mr. Bradt expressed his thanks to the donors on behalf of the B A C.

# DONALD C. NOYES

48½ Center Street

Tel. PProspect 3-6131

RUTLAND, VERMONT

**GENERAL CONTRACTOR**  
for

**ELEMENTARY SCHOOL  
ADDITION**

**Pittsford, Vermont**

## ELEMENTARY SCHOOL Readsboro, Vermont

### CONTENTS:

Eight Classrooms — 25 ft. x 32 ft., 9 ft. Ceiling Heights. Two primary grade classrooms have two individual toilets each off classroom. Six Classrooms use multiple toilets. Recessed entrances to Classrooms from Corridor; direct exit to outside from Primary classrooms. Wall counters and Grade-Aid Cabinet units consisting of S. S. Sink and bubbler, separate; Built-In Wardrobes with Teacher's Closet; 16 ft. length chalkboards; 40 lin. ft. of Tackboards. Teachers' & Health Room — 9 ft. x 25 ft. — with toilet and closet. Principal's Room — 15 ft. x 19 ft. — with closet; Vault — 10 ft. x 17 ft. 10 in. Boys' Toilet — 9 ft. x 25 ft. — 5 urinals, 3 water Closets, 2 Lavatories. Girls' Toilet — 9 ft. x 25 ft. — 5 Water Closets, 2 Lavatories. Book & Supply Closet — 10 ft. x 17 ft. — With shelves from floor to 8 ft. high. Janitor's Closet & Storage Area — 100 sq. ft. Multi-Purpose Room — 50 ft. x 60 ft., 16 ft. clearance under Bow-string Trusses; Recesses for 12 In-Wall tables. Stage — 17 ft. x 32 ft., 3 ft. above Multi-Purpose Room floor allowing for seat storage under. Kitchen — 17 ft. x 21 ft. — Serving Multi-Purpose Room as Cafeteria by serving counter with overhead door; Dirty Dish Counter, Sinks, Cup Counter Cupboards; Adequate Kitchen Storage Space — 9 ft. 6 in. x 9 ft. 6 in. Lobby — 10 ft. x 16 ft. Library — 19 ft. x 24 ft. 2 Public Toilets — Men's and Women's. Boiler Room — 16 ft. x 16 ft. Grounds Equipment Room. Loading Platform.

### MATERIALS:

Footings and Foundations — Concrete. Exterior Walls — Brick facing with Concrete reinforced

block back-up from top of foundation walls to underside of window sills and roof beams. Walls of Multi-Purpose Room and Gable Ends of School Portion of brick facing with concrete block back-up. Interior Partitions — Concrete Block, painted. Corridors to have a Vitritile dado, approx. 5 ft. 4 in. High. Multiple Toilets — Ceramic tile floors and 4 ft. dado. Roof Construction: School Portion — 2 in. x 14 in. Douglas Fir with roof boarding, insulation, tar and gravel roof. Roof of Multi-Purpose Room — Bow string trusses with purlins with 2 in. plank and naked roof. Roof — 20-yr. bonded 5-ply tar and gravel roof over School Portion. — 15-yr. guaranteed naked roof, asphalt treated. Gravel Stop & Drip Edge — Aluminum. Ceilings — Classroom & Corridor — 12 in. x 12 in. acoustical tile units. Boiler Room — Asbestos Cement Board. Stage, Kitchen, Small Toilets — Sheetrock, painted. Floors — Reinforced concrete slab on earth with plastic tile. Boys' & Girls' Toilets — Ceramic Tile; Stage — Wood. Door Buck and Trim Combinations — 16-ga. metal. Windows — Classrooms — Aluminum Ribbon Windows with Glass Block Above. Multi-Purpose Room & Kitchen — Architectural projected Aluminum Sash. Heating — Forced hot water using Vulcan fin radiation, unit ventilators; rooms temperature controlled & zoned. Ventilation — meeting all State requirements; Classroom vent ducts controlled by electrically operated fans and unitventilators. Plumbing — Standard school sizes meeting State requirements. Electric — Fluorescent, flush and incandescent lighting; Romex wiring.

### COSTS:

Item	Cost	% of Total Cost	Cost Per Sq. Ft.	Cost Per Cu. Ft.
Structure .....	\$158,611	68.	\$ 9.33	56.9
Heating, Ventilating & Plumbing .....	42,964	18.	2.53	15.4
Electric .....	14,210	7.	.83	5.2
<hr/>				
Construction Cost .....	215,785	93.	\$12.69	77.5
Site Work .....	17,500	7.		
<hr/>				
Total Construction Cost .....	\$233,285	100.		

Bid Opening — March 15, 1961

Total Volume: 278,300 Cu. Ft.

Total Area: 17,000 Sq. Ft.

Classroom Ceiling Height: 9 ft.

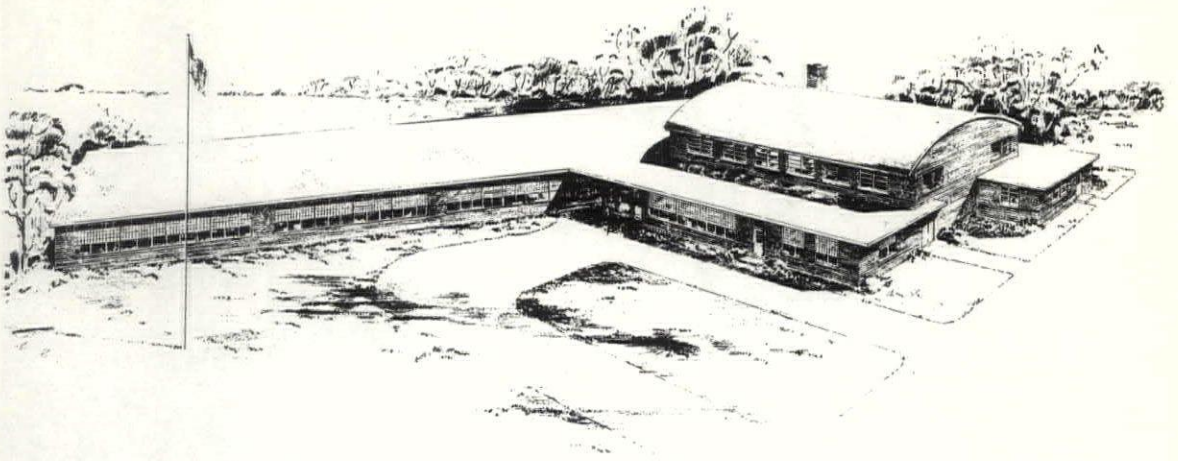
Multi-Purpose Room: 16 ft. Clearance under bow string trusses

**Architects & Engineers: Alfred T. Granger Associates, Hanover, N. H.**

General Contractor: R. E. Bean Construction Co., Inc., Keene, N. H.

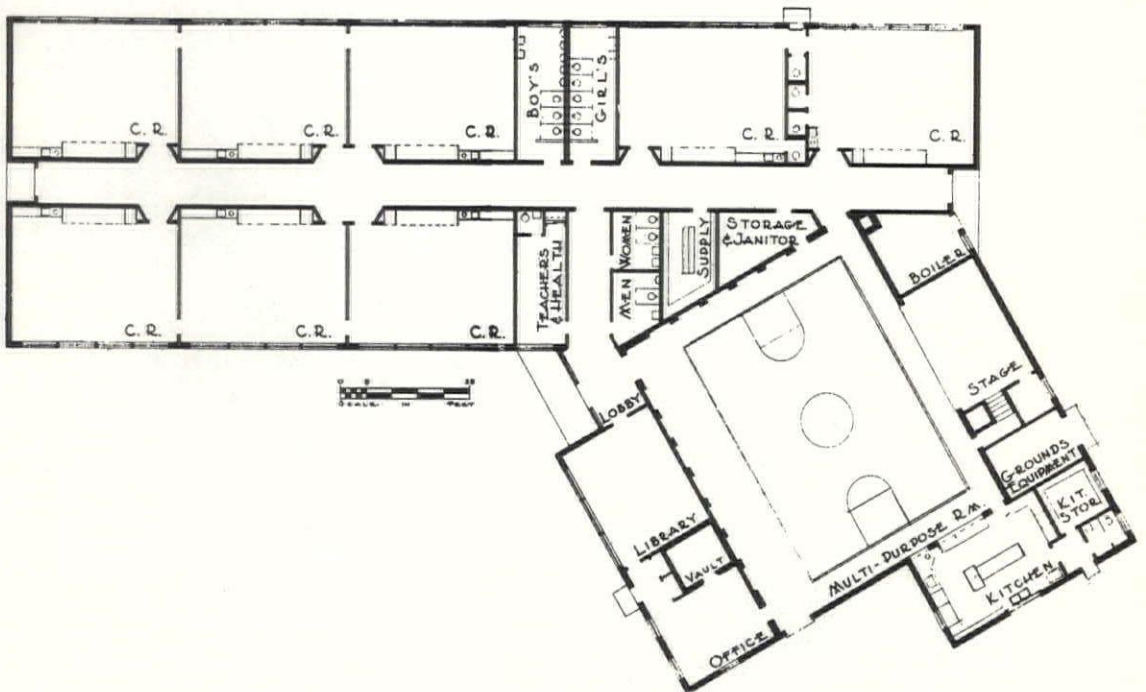
Superintendent of Schools: A. Weldon House

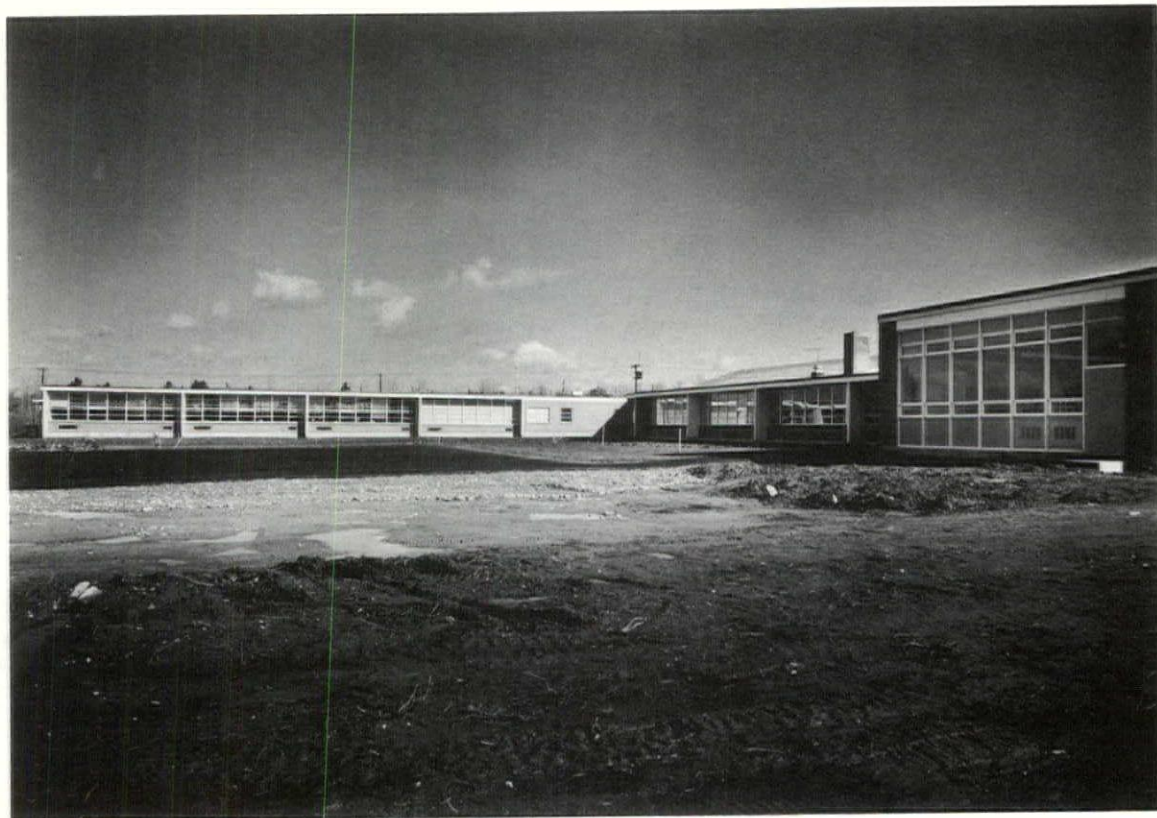




ALFRED T. GRANGER ASSOCIATES  
ARCHITECTS - ENGINEERS  
RANDOLPH, N.H.

PROPOSED ELEMENTARY SCHOOL · READSBORO · VERMONT





## **ROCHESTER JUNIOR HIGH SCHOOL** **Rochester, New Hampshire**

### **FACILITIES:**

The following facilities are provided: 13 Class-rooms. 2 Science Rooms. Industrial Arts Room. Homemaking Room. Multi-Purpose Room. Kitchen & Its Services. Library. Administrative Offices. Teachers' Rooms. Health Room. Shower & Locker Rooms. Toilets. Storage Rooms. Janitors' Rooms, etc.

### **FEATURES:**

Among the structural and material features are the following: Foundations: Concrete. Walls: Brick with masonry block backers. Windows: Aluminum awning. Roof Frame: Long-span steel decking except rigid steel bents in Multi-purpose Room. Roofing: 20 year built-up roofing, copper flashings. Floors: Concrete slabs with resilient flooring except tile in toilets, showers, kitchen, etc. Ceilings: Acoustical panels placed in troughs of steel deck. Wainscots: Structural facing tile in corridors, toilets, kitchen, etc. Lockers: Built-in along corridor walls. Electrical: Fluorescent troffers in troughs of steel deck; systems for fire alarm communication, television, and program clocks. Heating: Forced hot water system using No. 4 oil; unit ventilators; mechanical ventilation.

**Tracy & Hildreth, A.I.A., Architects, Nashua, N. H.**

**Harvey Construction Co., Inc., Manchester, N. H., General Contractors**



(Continued from page 37)

8. The projection screen should be mounted in a high central position so that unobstructed vision is possible from every student booth. It may be mounted over a chalk board.
9. Student book racks should be provided adjacent to some entrances. Many commercially supplied booths do not afford book storage space and language teachers frequently do not wish students to have any printed material during laboratory work. This provision will also reduce machine breakage caused by book storage in student booths.
10. For large schools or for future expansion in medium sized schools, door space should be provided to adjacent classrooms in order to permit passage without use of the corridor. They should have a lock feature as permitted by local and state fire and safety regulations.

#### Size

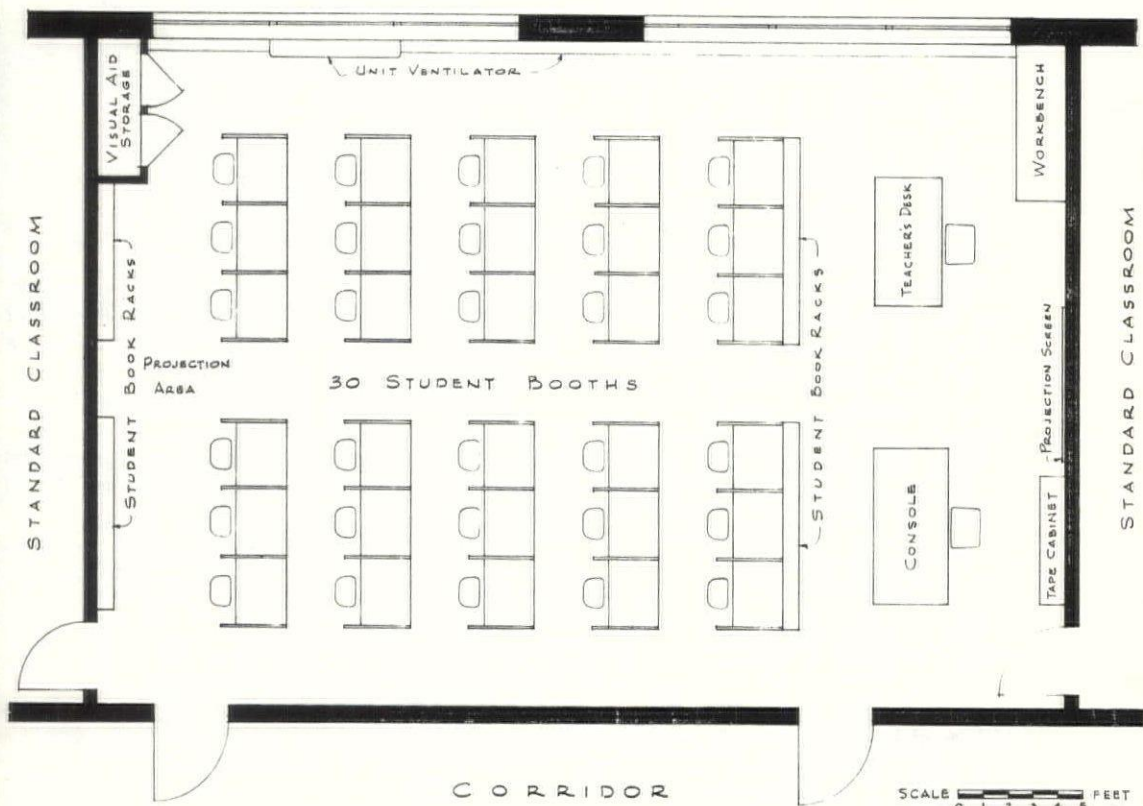
The laboratory should be large enough to accommodate the largest modern foreign language class anticipated. It is strongly recommended that this number not exceed thirty. The foregoing are based on the concept that language laboratory work is optimum in half-hour periods under the supervision of a

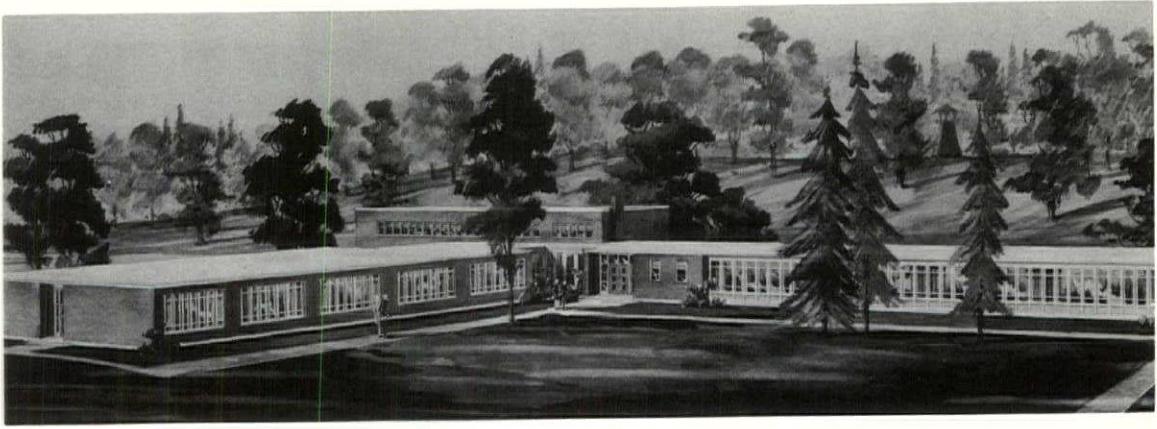
competent language instructor for an entire class. This would suggest that one language laboratory will provide twice as many laboratory periods as regular periods scheduled in a given school. This is most effectively implemented when the adjacent classroom(s) are used for foreign language instruction. (The diagram below shows a thirty station laboratory in a desirable arrangement including access to adjacent rooms).

When planning language laboratories, it is well to consider some of the desirable scheduling arrangements for the several levels of study. First and second year classes are generally scheduled for four or five laboratory periods per week. Third, fourth, and fifth year classes may be scheduled for two or three laboratory periods per week. In any arrangement, the beginning levels should be scheduled about twice as frequently as the advanced levels.

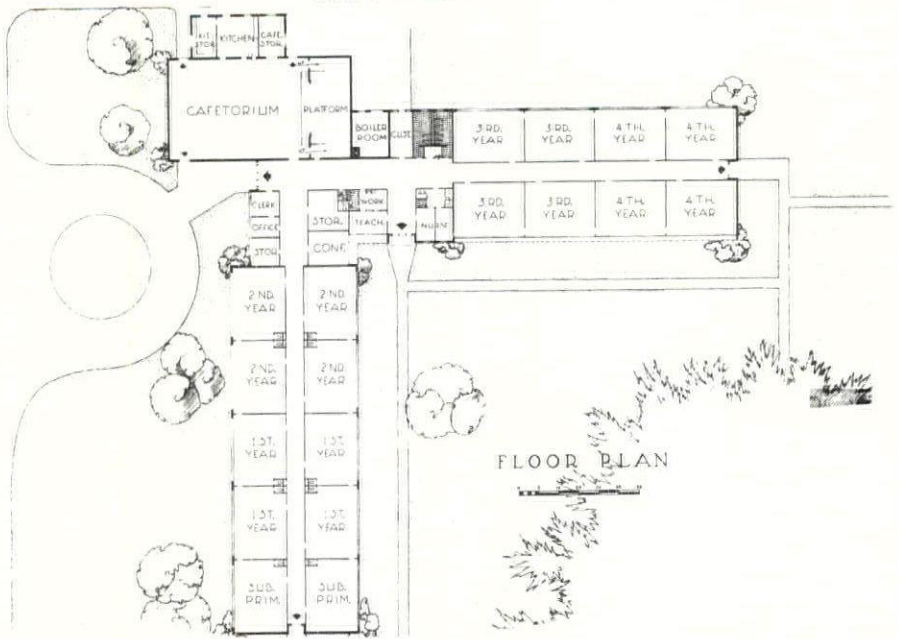
#### Equipment

The selection of the furniture and electronic equipment for the teacher and student positions should be made by the professional staff of the school working with the staff of the State Department of Education. Many instructional considerations will determine the type of equipment selected as well as the various electronic features which should be included.





## ELEMENTARY SCHOOL BUILDING Saco, Maine



### DESCRIPTION:

Reinforced Concrete Foundations; Reinforced Dampproofed Concrete Floor Slabs; Structural Steel Frame; Precast Concrete, Insulating, Roof Decking and Twenty Year Bonded Roofing; Lead coated Copper Flashing; Aluminum Sash; Brick Facing with Cinder Tile Backing; Cinder Tile Interior Partitions; Asphalt Tile Floors in corridors and Classrooms; Vinyl-Asbestos Tile in

Kitchen and Cafetorium; Ceramic Tile floors and Dados in Toilets; Acoustical Tile Ceilings on Steel Suspension system; Steel Interior Doors and Frames; Incandescent Lighting; Sixty (60) Plumbing Fixtures; Zoned, Forced Hot water Heating System with Individual Room Controls; Forced Ventilation System; Program and Fire Alarm systems.

ITEM	Cost	% of Total Cost	Cost Per Sq. Ft.	Cost Per Cu. Ft.
Structure .....	\$258,509.00	78.5	\$7.63	0.478
Plumbing, Heating & Ventilating .....	53,694.00	16.3	1.58	0.099
Electrical .....	16,887.00	5.2	.49	0.031
<b>Total Cost of Building .....</b>	<b>\$329,090.00</b>	<b>100.0</b>	<b>\$9.70</b>	<b>0.608</b>

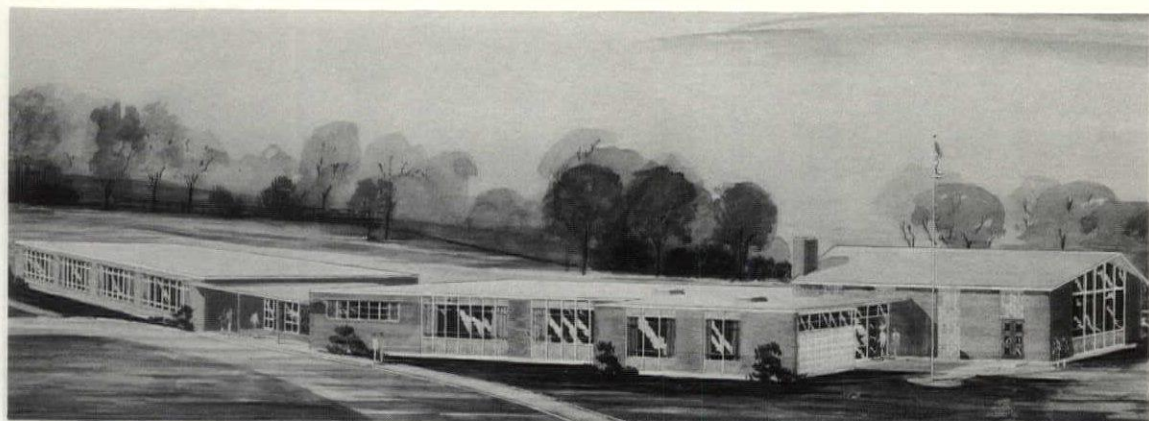
Total Volume: 539, 834 cu. ft.

Total Floor Area: 33,850 sq. ft.

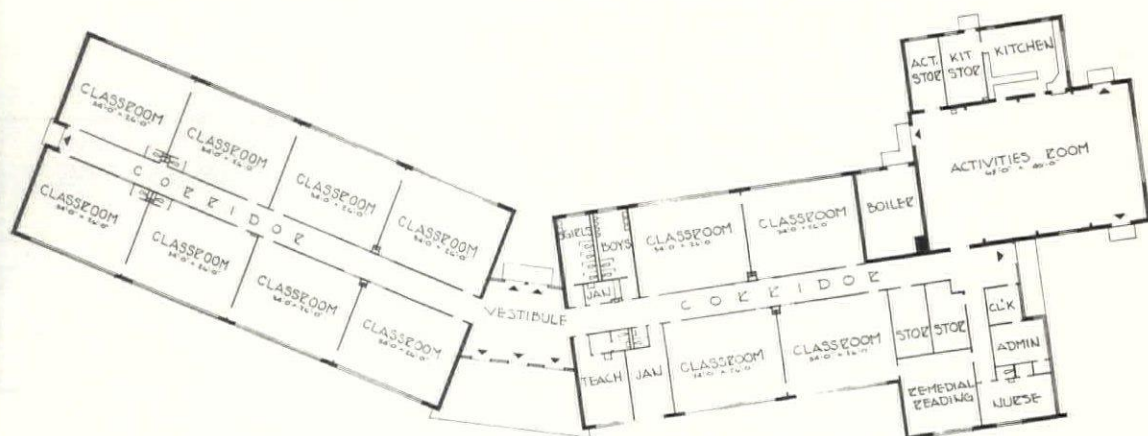
Ceiling Heights: Classrooms — 10'-0"; Cafetorium — 18'-0"

**Irving W. Hersey Associates, A. I. A., Architects, Durham, N. H.**





**Addition to  
HAIGH ELEMENTARY SCHOOL BUILDING  
Salem, New Hampshire**



**DESCRIPTION:**

Reinforced Concrete Foundations; Reinforced, Dampproofed Concrete Floor Slabs; Structural Steel Frame; Precast Concrete, Insulating, Roof Decking and Twenty Year Bonded Roofing; Lead Coated Copper Flashing; Aluminum Sash; Kalwall Panels; Brick Facing with Cinder Tile Backing; Cinder Tile Interior Partitions; Asphalt Tile Floors in Classrooms; Vinyl Asbestos Tile in Corridors, Kitchen and Activities Room; Ceramic Tile

Floors and Dados in Toilets; Acoustical Tile Ceilings on Steel Suspension; Steel Interior Doors and Frames; Fluorescent Lighting; Fifteen (15) Plumbing Fixtures; Extension of Existing Hot Water Heating System in Present Building supplied from New Boiler; Forced Ventilation System; Refrigeration System in Cooler and Freezer Rooms in Basement. Program and Fire Alarm Systems; T.V. Hookup.

ITEM	Cost	% of Total Cost	Cost Per Sq. Ft.	Cost Per Cu. Ft.
Structure .....	\$111,685.00	71.3	\$ 7.99	\$0.58
Plumbing, Heating & Ventilating .....	33,224.00	21.2	2.34	0.17
Electrical .....	11,737.00	7.5	.87	.05
<b>Total Cost of Additions .....</b>	<b>\$156,646.00</b>	<b>100.0</b>	<b>\$11.20</b>	<b>\$0.80</b>

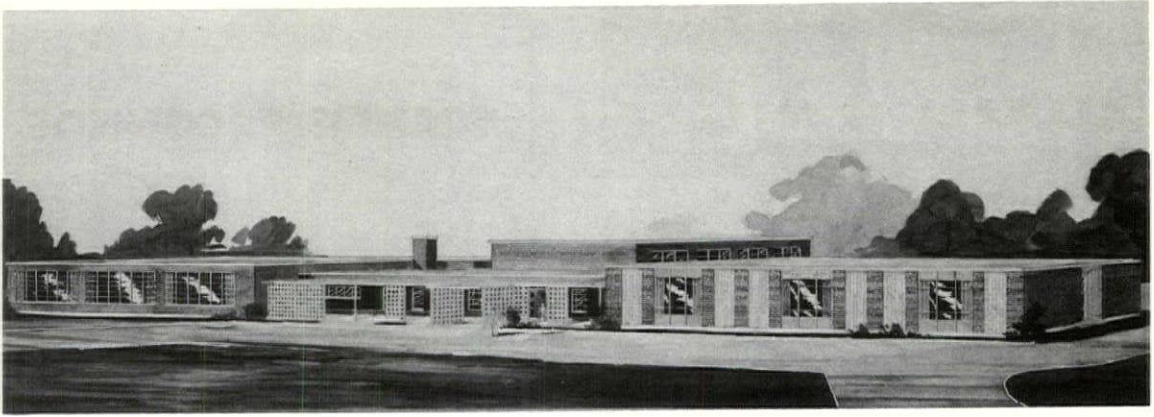
Work in Existing Building: \$10,820.00

Total Volume: 195,217 cu. ft.

Total Floor Area: 13,985 sq. ft.

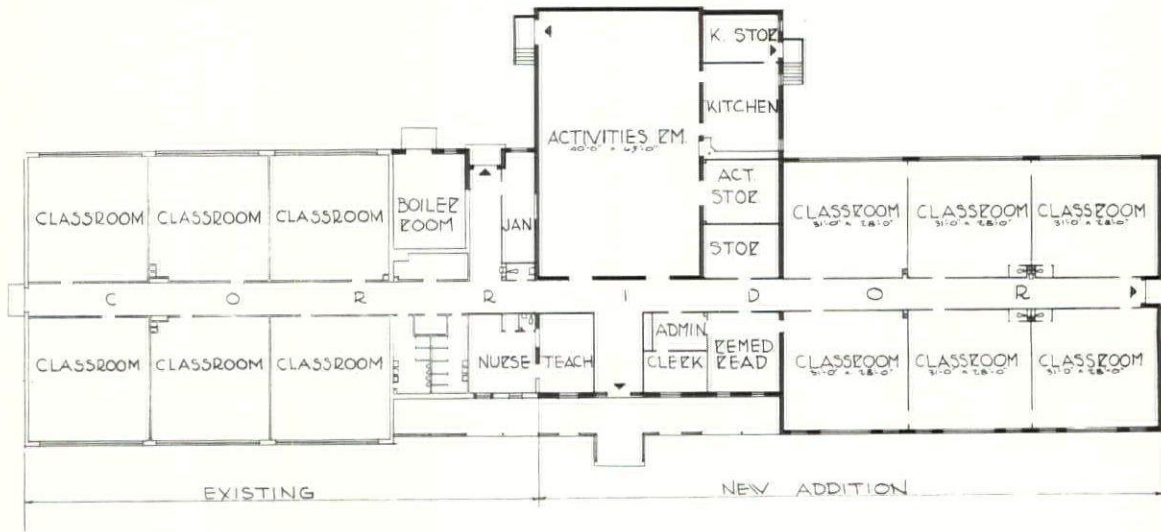
Ceiling Heights: Classrooms 10'-3" Activity Room 14'-1"

**Irving W. Hersey Associates, A. I. A., Architects, Durham, N. H.**  
**General Contractor: Blanchard Stebbins, Inc., Manchester, N. H.**



## NEW NUMBER EIGHT ELEMENTARY SCHOOL BUILDING

### Salem, New Hampshire



#### DESCRIPTION:

Reinforced\* Concrete Foundations; Reinforced, Dampproofed Concrete Floor Slabs; Structural Steel Frame; Precast Concrete, Insulating, Roof Decking and Twenty Year Bonded Roofing over Classroom Area; Wood Plank over Laminated Wood Arches with Rigid Insulation; Twenty-Year Bonded Roof over Activities Room; Lead Coated Copper Flashing; Aluminum Sash; Kalwall Panels Brick facing with Cinder Tile Backing; Cinder

Tile Interior Partitions; Asphalt Tile Floors in Classrooms; Vinyl Asbestos Tile in Corridors, Kitchen and Activities Room; Ceramic Tile Floors and Dados in Toilets; Acoustical Tile Ceilings on Steel Suspension; Steel Interior Doors and Frames; Fluorescent Lighting; Thirty-Eight (38) Plumbing Fixtures; Zoned Forced Hot Water Heating System with Individual Room Controls; Forced Ventilation System. Fire Alarm, Program, and Intercom System; T. V. Hookup.

ITEM	Cost	% of Total Cost	Cost Per Sq. Ft.	Cost Per Cu. Ft.
Structure .....	\$201,230.00	76.2	8.51	0.60
Plumbing, Heating & Ventilating .....	48,601.00	18.9	2.05	0.14
Electrical .....	12,736.00	4.9	.54	.03
<b>Total Cost of Building .....</b>	<b>\$262,567.00</b>	<b>100.0</b>	<b>11.10</b>	<b>0.77</b>
Total Volume: 341, 272 cu. ft.				
Total Floor Area: 23,643 sq. ft.				
Ceiling Heights: Classrooms 10'-4" Activity Room 16'-0"				

**Irving W. Hersey Associates, A. I. A., Architects, Durham, N. H.**  
**General Contractor: Blanchard Stebbins, Inc., Manchester, New Hampshire**



## **ROWELL & MILLER**

### **Electrical Contractors**

BOX 123

154 WEBSTER ST. HUDSON, N. H.

Tel. TUxedo 3-7053 - TU 3-7993 - TU 3-7098

---

### **Electrical Contractors**

AT

**New Grade School  
Somersworth, N. H.**

## **FRANCIS P. CONNOR & SON, INC.**

---

### **Plastering Contractor**

ROCHESTER JUNIOR  
HIGH SCHOOL

EXETER HIGH SCHOOL  
ADDITION

MILLER STUDENT CENTER  
K.U.A., MERIDEN

12 John Street

Dial TU 2-0451

NASHUA, N. H.

# **BLANCHARD STEBBINS, INC.**



## **Commercial and Industrial Work**

330 Lincoln Street

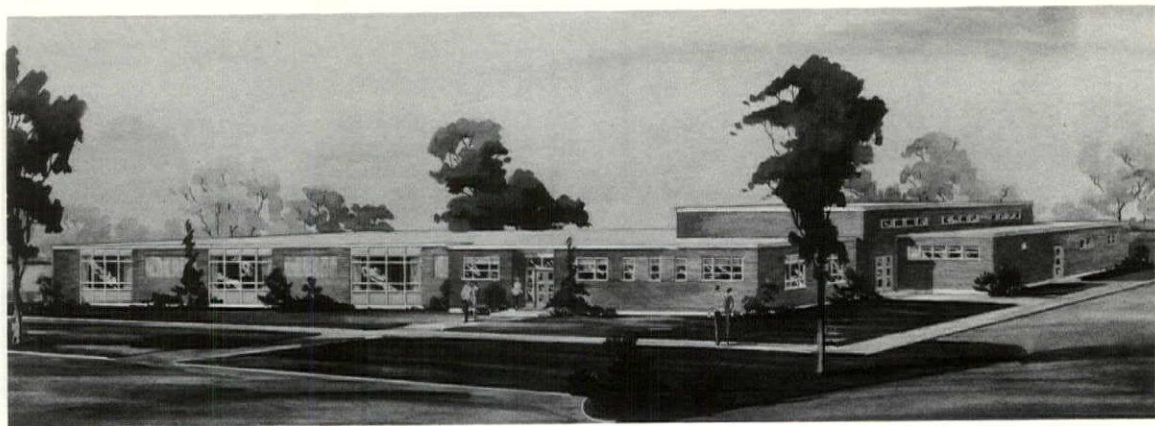
Dial NA 3-2273

MANCHESTER, N. H.

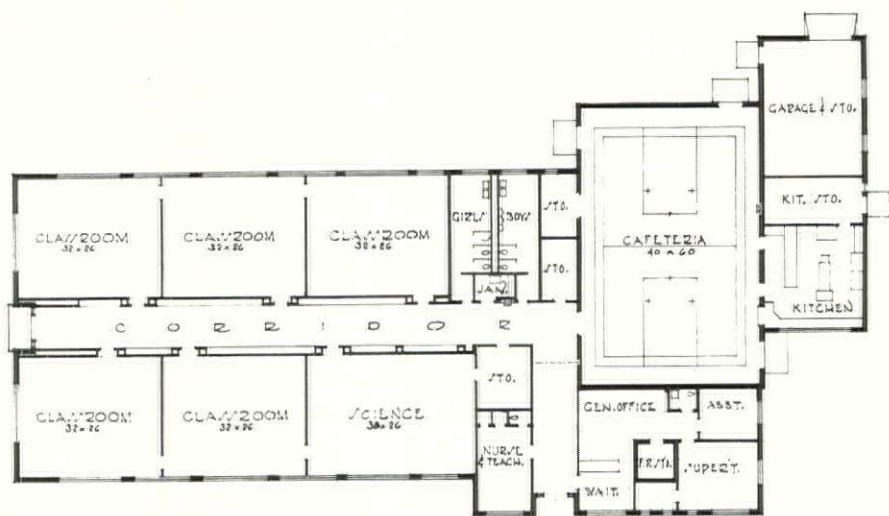
*General Contractor*

**Addition to  
Haigh Elementary School**

**New Number Eight  
Elementary School  
Salem, N. H.**



## NEW GRADE SCHOOL BUILDING Somersworth, New Hampshire



### DESCRIPTION:

Reinforced Concrete Foundations; Reinforced, Dampproofed Concrete Floor Slabs; Structural Steel Frame; Precast Concrete, Insulating, Roof Decking and Twenty Year Bonded Roofing. Lead Coated Copper Flashing; Aluminum Sash and Kalwall Panels; Brick Facing with Cinder Tile Backing and 2" of Insulation Between Brick and Cinder Tile; Cinder Tile Interior Partitions; Asphalt Tile Floors in Corridor and Classrooms;

Vinyl-Asbestos Tile in Kitchen and Cafeteria; Ceramic Tile Floors and Dados in Toilets; Acoustical Tile Ceilings on Steel Suspension System; Steel Interior Doors and Frames; Fluorescent lighting; Twenty-two (22) Plumbing Fixtures; Electric Heating System with Individual Room Controls; Forced Ventilation System; Program, Fire Alarm and Inter-communication Systems; Television Hook-up.

ITEM	Cost	% of Total Cost	Cost Per Sq. Ft.	Cost Per Cu. Ft.
Structure .....	\$140,787.00	76.7	9.73	0.669
Plumbing & Ventilating .....	15,500.00	8.5	1.07	.073
Electrical( Including Heat) .....	27,211.00	14.8	1.89	.129
<b>Total Cost of Building .....</b>	<b>\$183,498.00</b>	<b>100.0</b>	<b>12.69</b>	<b>0.871</b>
Total Volume: 210,198 cu. ft.				
Total Floor Area: 14,453 sq. ft.				
Ceiling Heights Classrooms — 10'-0"; Cafeteria — 18'-0"				

**Irving W. Hersey Associates, A. I. A., Architects, Durham, N. H.**  
**General Contractor: Adrien A. Labrie, Inc., Litchfield, N. H.**



## **W. H. De LONG**

INCORPORATED

**MIDDLEBURY, VERMONT**

**General Contractor**

addition to

**ELEMENTARY SCHOOL  
STOWE, VERMONT**

*Other Construction In Progress*

OTTER VALLEY UNION SCHOOL

Brandon - Pittsford Area

CHITTENDEN TRUST COMPANY

Middlebury, Vt.

## **ANDRE COURCHESNE**

Greer St., R. F. D. #4

MANCHESTER, N. H.

Tel. NA 2-4179

**General Contractor**

for

**Windham  
Elementary School  
Windham,  
New Hampshire**

# **ADRIEN A. LABRIE INC.**

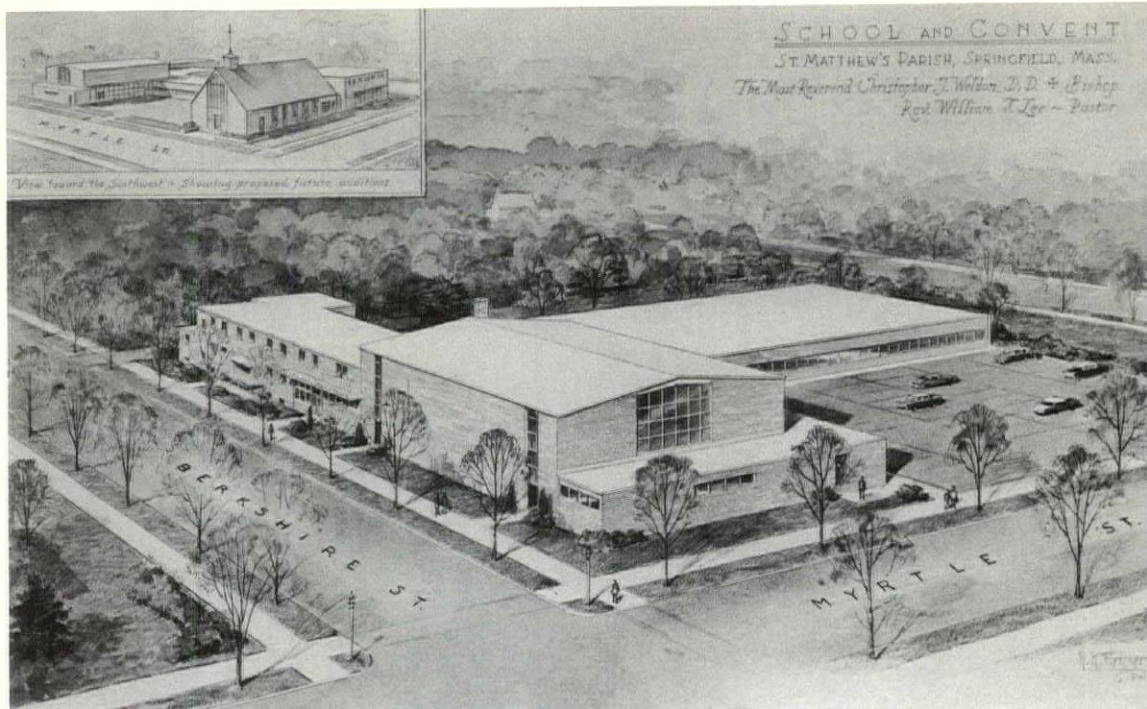
**Litchfield, N. H.**

Dial HArrison 4-5623

**GENERAL CONTRACTOR**

for

**NEW GRADE SCHOOL  
SOMERSWORTH, N. H.**



## SCHOOL AND CONVENT • ST. MATTHEW'S PARISH Springfield, Massachusetts

### DESCRIPTION:

School facilities provided: 8 classrooms and kindergarten, administrative offices, health unit kitchen, auditorium-gymnasium with stage and locker rooms; 8 additional classrooms to be added on a future second floor over classroom wing. A Church and new Rectory are to be added in the future.

Convent facilities provided: Complete living and dining facilities for a community of fourteen nuns.

### CONSTRUCTION DATA:

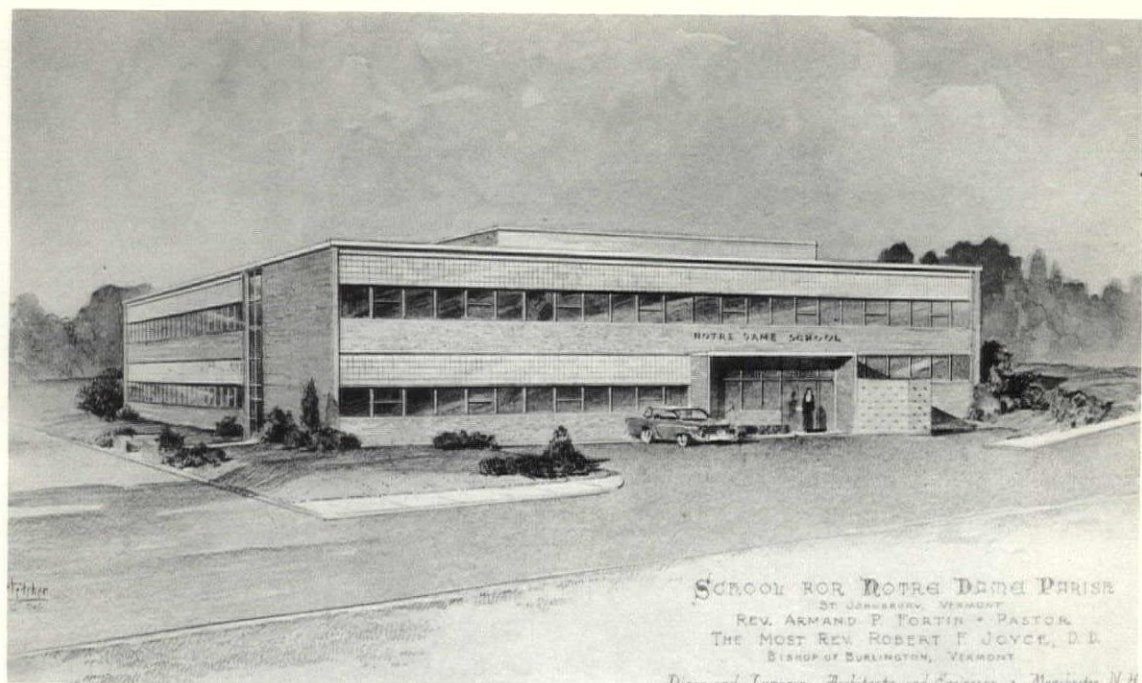
Concrete foundation, concrete floor slab; brick and concrete block exterior walls, concrete interior partitions; asphalt, vinyl asbestos and ceramic floor finishes; acoustical plaster ceiling; concrete and poured-in-place roof slabs on steel joists; 20 year tar & gravel roof; aluminum windows and glass blocks; zoned forced hot water heat; mechanical supply and exhaust ventilation; fluorescent and incandescent lighting fixtures.

Contract Price: \$488,174.00

Date of Bid: December 29, 1960

**Dirsa & Lampron, A. I. A., Architects, Manchester, N. H.**





## ELEMENTARY SCHOOL • NOTRE DAME PARISH St. Johnsbury, Vermont

### DESCRIPTION:

Facilities provided: 12 classrooms, administrative offices, health unit, kitchen, auditorium-gymnasium with stage and dressing rooms. This school is fire-proofed throughout and will have a four hour fire rating.

### CONSTRUCTION DATA:

Concrete foundation, concrete floor slab; brick and concrete block exterior walls, concrete block interior partitions; asphalt, vinyl asbestos and ceramic floor finishes; acoustical plaster ceilings; concrete and poured-in-place roof slabs on steel joists; 20 year tar & gravel roof; aluminum windows and glass blocks; zoned forced hot water heat; mechanical supply and exhaust ventilation; fluorescent and incandescent lighting fixtures.

Contract Price: \$285,850.00

Date of Bid: November 9, 1960

Date of Occupancy: September, 1961

**Dirsa & Lampron, A. I. A., Architects, Manchester, N. H.**  
**R. E. Bean Construction Co., Inc., Keene, N. H., General Contractor**



## ADDITION TO ELEMENTARY SCHOOL

### Stowe, Vermont

#### CONTENTS:

Four Classrooms — 24 ft. 10 in. x 34 ft.; Activities Room — 38 ft. x 63 ft. 8 in.; Storage Room — 11 ft. 8 in. x 18 ft. 8 in.; Teachers' Room — 11 ft. x 16 ft. — with Closet and Toilet; Supply Closet — 11 ft. x 24 ft. 10 in. — with shelving; Grounds Equipment Room — 12 ft. 4 in. x 20 ft. Gymnasium Storage Room — 12 ft. 4 in. x 19 ft. 6 in.; Boys' Toilet — 9 ft. 2 in. x 21 ft. 6 in.; Girls' Toilet — 9 ft. 2 in. x 21 ft. 6 in.; Janitor's Closet — 4 ft. x 7 ft. Boiler Room — 18 ft. 4 in. x 24 ft. 10 in.; Corridor — with 130 Built-In Lockers; Connecting Corridor.

#### CONSTRUCTION MATERIALS

Foundation Walls & Footings — Concrete. Exterior Walls: Concrete Block from top of foundations to underside of window sills; Redwood Sheathing from underside of window sills to roof. Outside Finish: White pine and plywood soffits. Interior Partitions — Concrete block, painted; Ceramic tile dados in Toilets; Structural glazed tile dados in corridors. Insulation — Outside wood walls insulated with 2" blanket insulation. Roof insulated with two 1/2" thicknesses of insulation board. Roof Construction — 2' x 14" Douglas

Fir, 16" o.c. Roof — 20-yr. bonded 5-ply tar and gravel with l.c. copper gravelstop. Flashing — Copper and fabric flashing. Ceilings: Corridor ceilings furred down to 8' covered with 12" x 12" acoustical tile units; Classrooms & Activities Room strapped and covered with 12" x 12" acoustical tile units; Toilets and Closets have sheetrock ceilings, painted. Floors — Reinforced waterproofed concrete slab on earth with plastic tile flooring, excepting Toilets & Janitor's Closet which have ceramic tile and Boiler Room which is granolithic. Door Bucks & Trim — 16 ga. metal. Windows — Classroom portion, tip-in & tip-out alternating type white pine sash; Grounds Equipment and Gym Storage Rooms, steel sash. Heating — Forced hot water with Vulcan fin radiation, unit ventilators; rooms temperature controlled. Ventilation — Meeting all State requirements; in Classrooms, vents; in Activities Room, vents to electrically operated fans and unit ventilators; Toilets and Janitor's Closet ventilated. Plumbing — Meeting State requirements, Standard School Sizes. Electric — Fluorescent, Flush and Incandescent lighting; Romex wiring.

#### COSTS:

Item	Cost	% of Total Cost	Cost Per Sq. Ft.	Cost Per Cu. Ft.
Structure .....	\$ 84,645	66.4	\$ 8.06	\$ .51
Heating, Ventilating & Plumbing .....	30,995	24.3	2.95	.19
Electrical .....	11,848	9.3	1.13	.07
<b>Total Construction Cost .....</b>	<b>\$127,488</b>	<b>100.0</b>	<b>\$12.14</b>	<b>.77</b>

Bid Opening: March 3, 1961

Total Volume 165,700 Cu. Ft.

Total Area: 10,500 Sq. Ft.

Ceiling Height: 9'-0"

**Architects & Engineers: Alfred T. Granger Associates, Hanover, N. H.**

**General Contractor: W. H. DeLong, Inc., Middlebury, Vermont**

**Superintendent of Schools: Charles P. Boright**





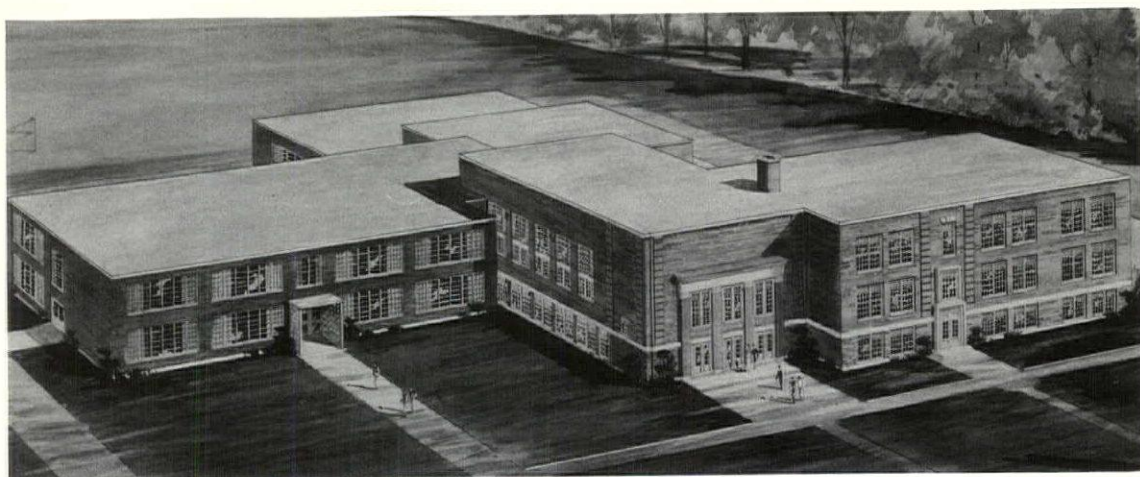
**JUNIOR-SENIOR HIGH SCHOOL  
MONADNOCK REGIONAL SCHOOL DISTRICT  
Swanzey Center, New Hampshire**

Contract Price: \$1,596,687.00

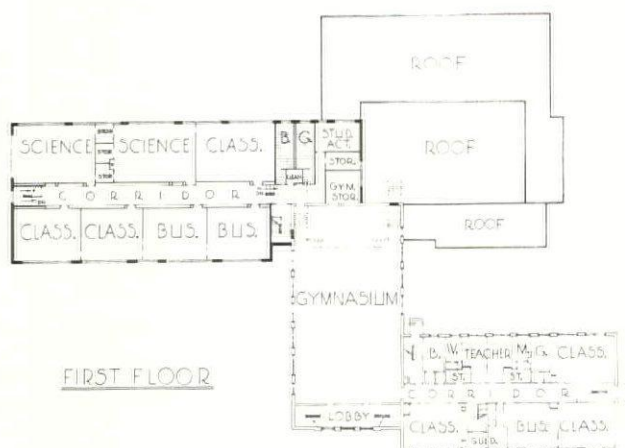
Date of Bid: September 28, 1961

**Dirsa & Lampron and John Holbrook, A. I. A., Associate Architects**  
**Engelhardt, Engelhardt & Leggett, Educational Consultants**  
**The MacMillin Company, Incorporated, Keene, New Hampshire**  
**General Contractors**

Publishers note: This school, New Hampshire's latest Cooperative Junior-Senior High School will be featured in a later issue of the New Hampshire Architect with pictures and plans.



## HIGH SCHOOL ADDITION TILTON-NORTHFIELD UNION SCHOOL DISTRICT Tilton, New Hampshire



### DESCRIPTION:

Reinforced Concrete Foundations; Reinforced, Dampproofed Concrete Floor Slabs at Ground Floor; Structural Steel Frame; Concrete Slab on Steeltex at First Floor; Precast Concrete; Insulating, Roof Decking and Twenty Year Bonded Roofing; Lead Coated Copper Flashing; Aluminum Sash; Brick facing with Cinder Tile Backing; Cinder Tile Interior Partitions; Asphalt Tile Floors in Corridors and Classrooms; Vinyl-Asbestos Tile

in Kitchen, Cafeteria and Platform; Ceramic Tile Floors and Dados in Toilets; Acoustical Tile Ceilings on Steel Suspension System; Steel Interior Doors and Frames; Incandescent lighting; Sixty-two (62) Plumbing Fixtures; Zoned, Forced Hot Water Heating System in New Addition supplied from New Boiler in Present Boiler Room; Forced Ventilation System; Program and Fire Alarm System.

ITEM	Cost	% of Total Cost	Cost Per Sq. Ft.	Cost Per Cu. Ft.
Structure .....	\$274,078.00	77.2	\$ 8.30	0.589
Plumbing, Heating & Ventilating .....	59,058.00	16.6	1.78	0.126
Electrical .....	21,546.00	6.2	.65	.046
<b>Total Cost of Additions .....</b>	<b>\$354,682.00</b>	<b>100.0</b>	<b>\$10.73</b>	<b>0.761</b>

Work in Existing Building: \$18,594.00

Total Volume: 465, 283 cu. ft.

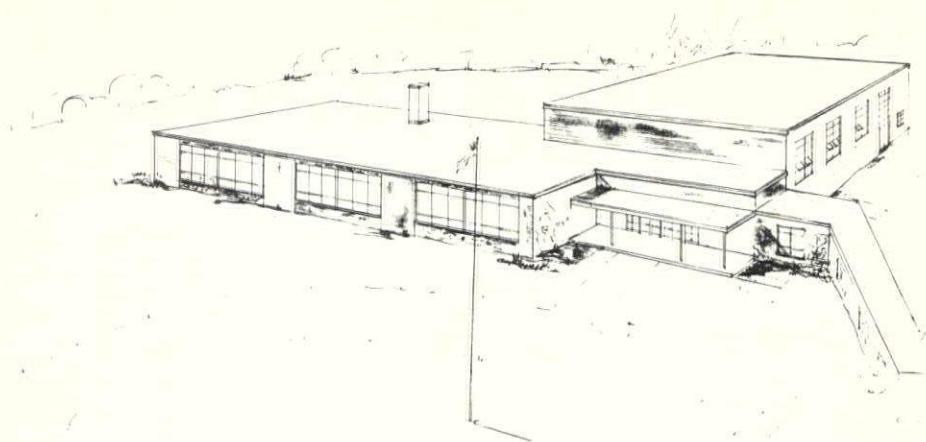
Total Floor Area: 32,992 sq. ft.

Ceiling Heights: Ground Floor — 10 ft.-2 in.; First Floor — 10 ft.-4 in.; Cafeteria — 14 ft. 6 in.; Shop — 10 ft.-2 in.

**Irving W. Hersey Associates, A. I. A., Architects, Durham, N. H.**

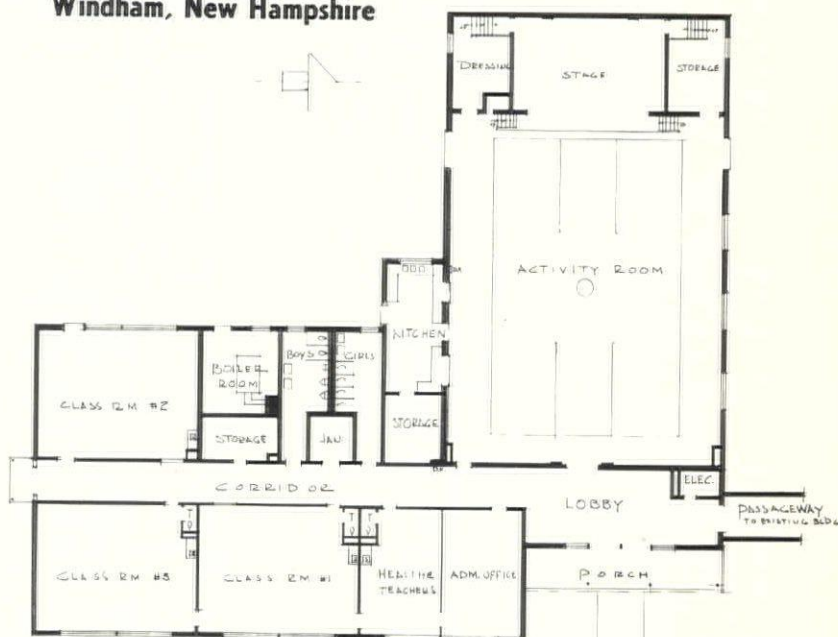
**General Contractor: Winston P. Titus, Laconia, N. H.**





## WINDHAM ELEMENTARY SCHOOL

### Windham, New Hampshire



#### DESCRIPTION:

Footings and foundations — reinforced concrete; Exterior walls — brick veneer, lightweight block backup; Interior partitions — lightweight block; Floors — reinforced slab on grade; Stage — wood, fir; Toilet rooms — ceramic tile; Roof construction — structural steel frame, open web steel joists, precast insulating roof deck, 20 year built-up roofing; Windows — aluminum sash; Ceilings — in-

combustible acoustical tile; Activity room — exposed structure; Interior finish — masonry walls painted, glazed dado toilet rooms, lobby and corridor; Heating — forced hot water system; Plumbing — standard fixtures, sink cabinets in classrooms; Electrical — fluorescent lighting in classrooms, incandescent fixtures remainder, fire alarm system, program system.

ITEM	Cost	% of Total Cost	Cost Per Sq. Ft.
Structure .....	\$105,356.00	72.	\$ 8.18
Plumbing, Heating & Ventilating .....	31,340.00	21.	2.39
Electrical .....	9,900.00	7.	.79
Total Cost of Building	\$146,596.00	100.	\$11.36

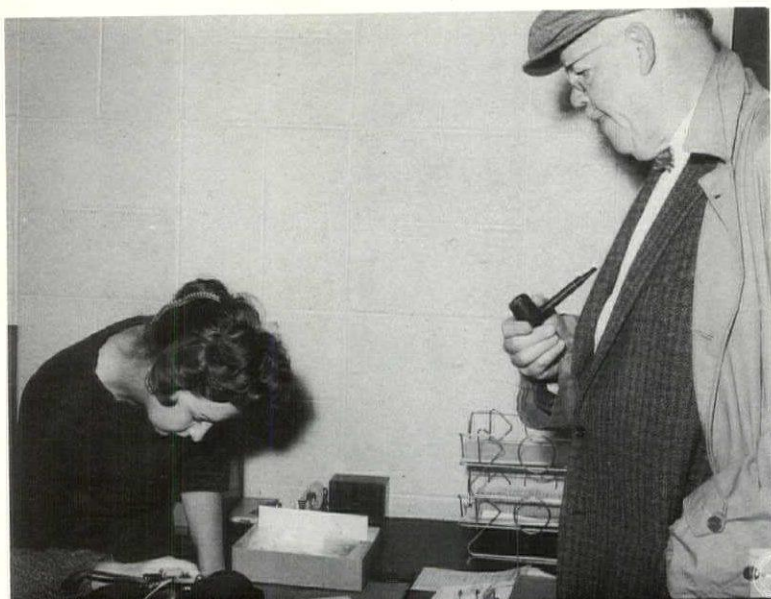
Area: 12,900 Sq. Ft.

Date of Bid: March 1961

**Alexander J. Majeski, A. I. A., Architect, Manchester, N. H.**

**Andre Courchesne: Manchester, N. H., General Contractor**

Architects and engineers view load tests and other demonstrations at plant of Structural Concrete Corp., at Franklin, N. H.



Signing up. Norman P. Randlett, A.I.A., Laconia, N. H. and Mrs. Nils Skorve, Secretary, Structural Concrete Corp.



As the rains came down, with and without rain coats and under temporary canvas shelters load tests went on. Two hours later the sun came out.



Group of architects, engineers and guests on make shift bleachers made with standard double tee slabs.





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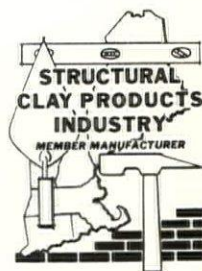


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